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EVOLUTIONARY STAGES, PROGRESS, AND THE EVALUATION OF CULTURES*

LESLIE A. WHITE

THE FOLLOWING three closely related propositions have been advanced or held by numerous anthropologists, especially by those of the Boas group, for some time: (1) The concept of evolutionary stages is invalid; (2) The idea of progress is necessarily subjective and therefore cannot be used in a scientific account of culture change; (3) Cultures cannot be evaluated; especially is it unwarranted to declare that one culture is "better" or "higher" than another. This essay will argue that: (1) "Evolutionary stages" is a realistic and scientifically valid concept; (2) Progress in culture change is something that can be defined in objective terms and measured by an objective standard, or standards, and that, therefore, (3) Cultures can be evaluated and graded in terms of "higher," "more advanced," etc. It will also show that many of those who reject these concepts in theory have used them extensively in practice. Let us turn now to the testimony and evidence.

Evolutionary Stages. In the first edition of *The Mind of Primitive Man,* Franz Boas declared that "serious objections may be made against the assumption of the occurrence of a general sequence of cultural stages among all the races of man."[1] Nineteen years later he observes that "the earlier hope of the discovery of a necessary sequence of cultural stages which would hold good for all mankind has been dissipated."[2] Goldenweiser regarded "the conception of

* The thesis of this paper was presented before the Central States Branch of the American Anthropological Association in Indianapolis on May 18, 1946.

1 Pp. 192-193 (New York, 1911; 1922 printing).

2 Article, "Anthropology" *(Encyclopedia of the Social Sciences,* vol. 2, New York, 1930), p. 109.

uniform cultural development with its fixed stages . . . as the major one of the three tenets of evolutionism."[3] It was therefore one of the chief objectives of the theoretical attack upon cultural evolutionism. "With the accumulation of adequate anthropological material," writes Goldenweiser, "the concept of uniformity of stages was shaken and then collapsed altogether."[4] Sapir interpreted the introduction of the concept of evolutionary stages into ethnology as follows:[5]

> Evolution was in the air. Everybody felt that it would be perfectly splendid if we could find a primitive stage of thought from which we had "evolved." Perhaps we could even find stages and play the game of stratigraphic geologist.

But this game, however jolly and engrossing it might be, was out of place in ethnology, according to Sapir, because "it gradually appeared that the doctrine of social stages could not be made to fit the facts laboriously gathered by anthropological research."[6]

R. H. Lowie "formally abjures" a "belief in laws regulating the independent reproduction of the same *series* of stages"[7] among different peoples. He quotes Maitland to show that

> any conceivable tendency in human society to pursue a fixed sequence of stages must be completely veiled by the incessant tendency to borrowing and thus becomes an unknowable noumenon that is scientifically worthless.[8]

In short, the concept of stages of cultural development is declared to be invalid.

In *The Economic Life of Primitive Peoples,* Melville J. Herskovits asserted that the " 'stages' of society Veblen took over from Lewis H. Morgan . . . are today quite outmoded."[9] Challenged on this point by a reviewer, he declared, "I am glad . . . to reaffirm my belief that the use . . . of such a concept as 'stages of development' implies a belief in a type of social evolution that cannot . . . be established as valid."[10] More recently still, Scudder Mekeel reports that "any theory that embraces a set series of evolutionary stages for culture has

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3 Alexander Goldenweiser, *Anthropology* (New York, 1937), p. 517.

4 A. Goldenweiser, "Social Evolution" *(Encyclopedia of the Social Sciences),* pp. 659-660.

5 E. Sapir, Review of R. H. Lowie, *Primitive Society* (The Dial, vol. 69, pp. 528-533, 1920).

6 E. Sapir, "Anthropology and Sociology" (in *The Social Sciences and their Interrelations,* Wm. F. Ogburn and Alexander Goldenweiser, eds., New York, 1927), p. 99.

7 *Primitive Society* (New York, 1920), p. 432.

8 *Idem.,* p. 435.

9 New York, 1940, p. 357.

10 *Economics and Anthropology: a Rejoinder* (Journal of Political Economy, vol. 49, 1941), p. 273.

been fairly well disposed of."[11] Wm. C. MacLeod declares that "the very theoretical basis of the stages concept is wholly untenable."[12]

Sociologists have perhaps been less inclined than ethnologists to repudiate the idea of evolutionary stages, but some of them do nevertheless. Thus we find Sutherland and Woodward telling how careful field workers "demolished the whole impressive theory . . . of successive stages of cultural evolution."[13] Kimball Young takes the same view.[14]

Thus we find that Boasian anthropologists have opposed the theory of stages of cultural evolution for decades, and that certain sociologists also have taken the same position. As a critical observer of social theory, Dorothy Gary, has put it:[15]

> For some years now the favorite sport among one section of American students of culture has been that of knocking the various so-called 'stage' theories of social evolution into a cocked hat—at least to their own satisfaction.

She goes on to remark, however, that "this is good dramatics, and may be good journalism, but it is certainly not good science."

Progress. Goldenweiser has perhaps given us the best statement of the usual objection to the concept of progress. "The notion of progress," he writes, "implied judgments as to what constituted improvements, and no such judgments could be made without standards, which are notoriously subjective. The idea of progress was thus relegated from the domain of fact to that of opinion."[16] The "notion of progress as a constant or necessary feature of evolution" was, according to Goldenweiser, "the weakest of the three evolutionary tenets."[17]

Again we find some sociologists in agreement. Kimball Young decides that "the concept of progress is a matter of faith or belief rather than a symbol of

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11 Review of John Murphy, *Lamps of Anthropology* (American Sociological Review, vol. 8, 1943), p. 747.

12 *The Origin and History of Politics* (New York, 1931), p. 125.

13 R. L. Sutherland and J. L. Woodward, *Introductory Sociology* (New York, 1937), pp. 646-647.

14 *Sociology* (New York, 1942), p. 99.

15 "The Developing Study of Culture" (in *Trends in American Sociology*, G. A. Lundberg et al., eds., New York, 1929), p. 208.

16 "Evolution, Social" *(Encyclopedia of the Social Sciences)*, p. 660. See, also, "Anthropology and Psychology," p. 76, and "Cultural Anthropology," p. 140 (both in Alexander Goldenweiser, *History, Psychology, and Culture*, New York, 1933).

17 "Anthropology and Psychology" (in *History, Psychology and Culture)*, p. 76; also same essay as originally published in *The Social Sciences and Their Interrelations* (Ogburn and Goldenweiser, eds.), pp. 74-75.

some objective, tangible object."[18] Gregory and Bidgood find that "progress, in the last analysis, is essentially an attitude of mind and exists for a particular group when and to the extent the group believes it is taking place"[19] In short, progress is whatever anyone chooses to call "progress" and nothing more.

Evaluation of Cultures. Many years ago, Boas declared that the practice of evaluating cultures, which "was from the very beginning part and parcel of evolutionary anthropology," was subjective.[20] "It is but natural," he said, "that in the study of the history of culture our own civilization should become the standard, that the achievements of other times and of other races should be measured by our own achievements."[21] More recently, in the revised edition of *The Mind of Primitive Man,* he has expressed much the same view.[22]

Goldenweiser finds it impossible to arrange the five cultures described in *Early Civilization* "in an ascending series."[23] He notes that if he uses one criterion the five cultures will assume a certain order If he changes his criterion, the order changes. Thus, any one of the cultures can be placed at the top or at the bottom of the series, or anywhere in between, depending upon your criterion, and as Goldenweiser has already remarked, "standards are notoriously subjective." Herskovits, too, observes that a culture which "seemed to be a simple culture could, if judged by other of its characteristics, be an exceedingly complex one."[24]

R. H. Lowie discourses upon the impossibility of evaluating cultures: "When from definite customs and institutions we turn to the dynamics of social history the result is *again* the *impossibility of grading cultures*"[25] (emphasis ours).

Ruth Benedict has this to say:[26]

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18 Kimball Young, *Sociology* (New York, 1942), p. 925.

19 E. W. Gregory and L. Bidgood, *Introductory Sociology* (New York, 1939), p. 566.

20 *History of Anthropology* (Science, vol. 20, 1904, pp. 513-524), p. 517; see also p. 515. But for a supreme example of subjective evaluation we turn, not to the evolutionists, but to one of Boas' most distinguished students, Edward Sapir, who found "great cultures those that we instinctively feel to have been healthy spiritual organisms" *(Culture: Genuine and Spurious,* American Journal of Sociology, vol. 29, 1924, p. 410). Dr Lowie, too, finds the aboriginal culture of Polynesia to "rank among the very noblest of cultures devoid of the metallurgical art" *(Primitive Society,* p. 58).

21 *History of Anthropology,* p. 517.

22 New York, 1938, p. 225.

23 New York, 1922, pp. 125-126.

24 *Man, the Speaking Animal* (Sigma Xi Quarterly, vol. 21, June 1933, pp. 67-82), p. 68.

25 *Primitive Society* (New York, 1920), p. 439.

26 *Patterns of Culture* (New York, 1934), p. 1.

To the anthropologist, our customs and those of a New Guinea tribe are two possible social schemes for dealing with a common problem, and in so far as he remains an anthropologist he is bound to avoid any weighting of one in favor of the other.

In a recent article *On the Values in Culture*,[27] Melville J. Herskovits quotes a long passage from Lowie's *Primitive Society*, which he says implies "the impossibility of evaluating cultures at all." He then declares that "the recognition of the impossibility of evaluating different cultures is today firmly established," and, what is more, Herskovits assures us that this "represents a great advance toward clarity of thought as concerns the nature and functioning of human civilization."

Margaret Mead expresses this point of view as follows:[28]

> . . . Our contribution [as anthropologists] has been a recognition of the *co-equal value of human cultures* seen as wholes. . . . We have stood out *against any grading of cultures* in hierarchical systems which would place our own culture at the top and place the other cultures of the world in a descending scale according to the extent that they differ from ours. . . . We have stood out for a sort of democracy of cultures, a concept which would naturally take its place beside the other great democratic beliefs . . . [emphasis mine].

Thus we see that Boas and a number of his most prominent students reject the concept of evolutionary stages and declare that criteria for evaluating cultures are subjective and that consequently we cannot speak of progress, or of higher and lower cultures, in a scientific sense. They congratulate themselves on their emancipation from the old-fashioned notion that one culture may be better than another, and upon having made a "great advance toward clarity of thought" and "democratic belief" in ethnology. Their position is truly remarkable when one pauses to reflect upon it. It declares in effect that the culture of the Mayas was not higher than that of the Fuegians; that the civilization of the United States today is no higher than that of medieval England or, for that matter, of the Old Stone Age. These assertions will probably strike most scholars as well as laymen as ridiculous. We shall show that they fly squarely in the face of science as well as of common sense.

We wish now to discover the basis of their theoretical position in general and to examine their objections specifically. Before doing this, however, it might be well to make one point clear. What we have done so far is to state a thesis and

27 Scientific Monthly, vol. 54, 1942, pp. 557-560.

28 *The Role of Small South Sea Cultures in the Post War World* (American Anthropologist, vol. 45, pp. 193-196, 1943), p. 193.

to name some of those who have held it. Our concern is with *a point of view* rather than with all the varied utterances of the *individuals* who have held this view. It would be beside the point, therefore, to claim that if anthropologist X has supported this position on one occasion he has also said something else at some other time, or to charge that I have done an author an injustice because I have not noted everything that he has ever written on a given subject. I am well aware that many an anthropologist has taken more than one side on several important issues. In the foregoing, however, my concern has definitely not been with individuals and their views, consistent or otherwise. I have tried to focus attention upon a thesis that has been rather widely held in American anthropology for a number of decades and to quote the words of various scholars who have defended it. As we shall see shortly, many of the anthropologists cited above do not by any means live up to the principles to which they subscribe.

Stages, progress, and the evaluation of cultures are merely three aspects of one single issue: evolutionism or anti-evolutionism. Many, if not most, of the outstanding ethnologists of the latter part of the nineteenth century were evolutionists. They believed that culture has evolved, that definite stages in this development could be distinguished, that progress could be measured by scientifically valid standards and that, consequently, cultures could be evaluated. As everyone knows, a vigorous reaction against the philosophy of evolutionism got under way toward the close of the last century and has gathered weight and momentum in this one. In America the anti-evolutionist movement in ethnology was led by Franz Boas and his students. They fought evolutionism with vigor and persistence for many years. They have been so successful that many an observer has simply pronounced cultural evolutionism "dead." The Boasian position with regard to stages, progress, and the evaluation of cultures is therefore to be understood only in the light of their attitude toward evolutionism. If they denied evolution there could of course be no stages of development; if there were no stages, how could one speak of progress; and if progress is merely a subjective and biased attitude, how can one justly evaluate cultures? This, then, was their general position. They supported it by a number of specific arguments, however, some of which we shall now examine.

One of the most popular criticisms of the theory of stages was the charge that it would not fit the facts of culture history, that the sequence of stages was not always the same, that certain stages were sometimes skipped, etc. The favorite example of this had to do with the stone, bronze, and iron sequence. Almost every opponent of evolutionism has pointed out that in Africa the bronze stage was skipped, that tribes there went directly from stone to iron. This argu-

ment is, as I have shown elsewhere,[29] beside the point because the evolutionist's formula referred to sequences in a cultural process, to the development of metallurgical techniques, not to the culture historical experiences of peoples. The fact that certain tribes went directly from stone-working to iron-working in no way invalidated the evolutionist claim that *in the process of technological development* a bronze stage preceded a stage of iron. Similarly it was pointed out that some tribes went directly into an agricultural stage without passing through an intervening pastoral stage, although no evolutionist, so far as I know, ever claimed that a people would have to live for a time as pastoralists before they could become agriculturalists.

It is true that the critics of evolutionism made good their case against Morgan's series of stages of development of the family, from promiscuity to monogamy, and against those who argued that matrilineal clan organization must precede patrilineal clans. But the criticism that the stages posited by the evolutionists were not always separate and distinct, but oftentimes overlapped, was irrelevant and unfair because none of the major evolutionists ever claimed otherwise. On the contrary, both Morgan and Tylor specifically state that one stage may overlap another. Morgan wrote:[30]

> Stone implements were not entirely laid aside with the introduction of tools of iron, nor of those of bronze. . . . Moreover, since the period of stone implements overlaps those of bronze and of iron, and since that of bronze also overlaps that of iron, they are not capable of a circumscription that would leave each independent and distinct.

And Tylor cites the example of "village communities of old Europe . . . [in which] the fields were cultivated near the village, the cattle pastured in summer on the hills and in the woodlands belonging to the community where also the hunter went for game."[31] Thus he recognized that not two, but three, types of activity—agricultural, pastoral, and hunting—could exist side by side in a single cultural organization. Yet we find Goldenweiser citing, in criticism of the evolutionists, the fact that hunting, although "one of the earliest economic pursuits . . . persists through all subsequent stages; . . . [that] in Negro Africa, agriculture and pastoral life are pursued on an equally wide scale."[32] And

29 *Diffusion vs. Evolution: an Anti-Evolutionist Fallacy* (American Anthropologist, vol. 47, pp. 339-356, 1945).

30 *Ancient Society* (New York, 1877), p. 9. See, also, Tylor's article "Anthropology" (*Encyclopedia Britannica*, 11th ed.), p. 117, for an almost identical statement.

31 *Anthropology*, p. 220.

32 *Early Civilization*, pp. 25-26; see also his article "Social Evolution" in *Encyclopedia of the Social Sciences*, p. 660, and other critiques of evolutionism.

Kimball Young tells us that "the whole unilinear theory [of evolution] broke down . . . when we discover instances of people moving directly from hunting to agriculture, or that often fishing, hunting and rudimentary agriculture exist side by side . . ."[33]

The opponents of evolutionism struck at the concepts of stages and of progress alike with a single criticism, one that has confused the issue rather than clarified it. They have charged the evolutionists with placing our own culture at

> the summit of the ascent. . . . Whatever seemed most different from our customs was therefore reckoned as earliest, and other phenomena disposed wherever they would best contribute to the straight evenness of the climb upward.[34]

Ruth Benedict says the same thing and in much the same words.[35]

This is of course merely a restatement of a thesis set forth by Boas many years earlier. In 1904 he wrote as follows:[36]

> The subjective valuation which is characteristic of most evolutionary systems, was from the beginning a part and parcel of evolutionary anthropology. It is but natural that in the study of the history of culture our own civilization should become the standard, that the achievements of other times and other races should be measured by our own achievements.

Thirty-four years later he said:[37]

> It seems almost unavoidable that this standard will be based on our own experience, on our own civilization. It is clear that this is an arbitrary standard and it is perhaps *the greatest value of anthropology* that it makes us acquainted with a great variety of such standards [emphasis mine].

We find this thesis expressed more than once in Lowie's *Primitive Society*.[38] It occurs also in an article by John R. Swanton.[39] It is implied by Radcliffe-Brown in a recent article.[40] This is the sort of reasoning, according to the anti-evolutionists, that led the evolutionists to postulate primordial promiscuity. "It

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33 *Sociology*, p. 99.

34 A. L. Kroeber, *Anthropology* (New York, 1923), p. 8.

35 "The Science of Custom" (in *The Making of Man*, V. F. Calverton, ed., New York, 1931), p. 810.

36 *The History of Anthropology*, p. 517; see, also, p. 515 for similar statement.

37 "Methods of Research" (in *General Anthropology*, F. Boas, ed., New York, 1938), p. 676.

38 New York, 1920, pp. 56, 205.

39 *Some Anthropological Misconceptions* (American Anthropologist, vol. 19, pp. 459-470, 1917), p. 461.

40 *On Social Structure* (Journal, Royal Anthropological Institute of Great Britain and Ireland, vol. 70, pt. 1., 1940), p. 11.

was argued," says Kroeber, "that since we hold to definitely monogamous marriage, the beginnings of human sexual union probably lay in indiscriminate promiscuity."[41] Herskovits endorses this position.[42] Lowie expresses the same view:[43]

> It was eminently characteristic of the intellectual atmosphere of the period that Morgan's first stage should be a condition of perfect promiscuity. . . . Complete lack of regulation of sex life is manifestly the diametrical opposite of obligatory monogamy. For the mid-Victorian thinker it was a foregone conclusion requiring only statement not proof that monogamy is the highest form of marriage . . . and it was equally axiomatic that early man must have lived under conditions infinitely removed from that ideal goal. So Morgan made no pretense at producing empirical proof of pristine promiscuity. . . . He advanced promiscuity as a *logical postulate* . . . and thereby placed it beyond the range of scientific discussion.

This theory is hardly in accord with the facts. Tylor lived in the intellectual atmosphere of the mid-Victorian era, but he did not hold to the theory of primordial promiscuity. On the contrary he declared that:[44]

> Mankind can never have lived as a mere struggling crowd, each for himself. Society is always made up of families or households bound together by kindly ties, controlled by rules of marriage and the duties of parent and child.

Neither did Herbert Spencer subscribe to "perfect promiscuity" as the preliminary stage to human social evolution:[45]

> Complete promiscuity is held to have been not simply the practice but in some sort the law. . . . I do not think the evidence warrants us in concluding that promiscuity ever existed in an unqualified form. . . .

Thus we find that of the three major social evolutionists of the mid-Victorian era, only Morgan championed the promiscuity theory. His reason for doing so, however, was not that it was the "most opposite to monogamy." He formulated the theory as a part of his attempt to explain systems of relationship terms. As is well known, Morgan was a pioneer in the study of kinship systems. He collected systems of relationship terms from peoples all over the world. He classified them into types, and endeavored to provide a scientific explanation of them. On the assumption that these terms represented systems of consanguinity and affinity, to use his own phrase, he tried to reconstruct the forms of the family proper to each system of terminology. In this way he postulated a number of family forms which he arranged in a logical, and as he thought,

41 *Anthropology*, p. 8.
42 *Man, the Speaking Animal*, p. 69.
43 *Primitive Society*, p. 56.
44 *Anthropology*, p. 402.
45 *Principles of Sociology* (New York, 1885), vol. 1, p. 662.

chronological and evolutionary, series. His chain of reasoning led him, in the interests of completeness and consistency, to postulate a primordial condition of promiscuity out of which the various forms of the family had evolved. We are now convinced that his original assumptions were faulty and his conclusions unwarranted. But it cannot be said, in all fairness, that Morgan assumed an original state of promiscuity *because* that was the condition farthest removed from mid-Victorian monogamy. Dr Lowie is quite correct when he says that Morgan "advanced promiscuity as a logical postulate." To Morgan promiscuity seemed to be a logically necessary assumption, just as an ether once appeared to be a necessary assumption to physicists, necessary in order to provide light with a medium through which to travel. But we cannot accept Lowie's ruling that a logical postulate is "beyond the range of scientific discussion." The assumption of an ether did not place it outside the range of science. On the contrary, it placed the matter squarely before science as an hypothesis to be tested. It was tested and found wanting just as Morgan's theory of promiscuity was put to the test and discarded when it failed.

Thus we see that only one of the three major evolutionists championed the theory of promiscuity, and he did not espouse it for the reasons alleged by the opponents of evolutionism.[46] It would be well to have the record clear on this point.

Returning now to the allegation that the evolutionists simply arranged all cultures or traits in a series according to similarities with or differences from ours, we would admit of course that there is much truth in this charge. Tylor, as a matter of fact, sets forth this principle of evaluation in almost these very words.[47] Kroeber calls this assumption "astonishingly naïve." But, we would like to ask, "What is wrong with it as a premise?" We would argue that, if used critically, it may yield valuable results, results that could be obtained in no

46 Edward Sapir has a different explanation of the evolutionists' alleged concern with primitive promiscuity. "The theory of ancient sexual communism, so blithely accepted by the Spencers and the Morgans," he says, may be "due simply to a sublimated desire for sex gossip seeking shelter and justification in the high temple of science" (Review of Lowie's *Primitive Society* in The Nation, vol. 111, p. 47, July 10, 1920). As we have just seen, this suggestion—which is merely an assertion, unsupported either by argument or by evidence—would not apply to Morgan, Spencer, or Tylor. One is inclined to wonder if Sapir meant it to be taken seriously.

47 "The educated world of Europe and America," he says, "practically settles a standard by simply placing its own nations at one end of the social series and savage tribes at the other, arranging the rest of mankind between these limits according as they correspond more closely to savage or to cultured life." But he goes on to list a number of specific criteria by which similarities and differences may be determined. "The principal criteria of classification are the absence or presence, high or low development of the industrial arts, especially metal-working,

other way. Is not this method used in paleontology and studies of biological evolution in general? We have a choice between two alternatives. Either we assume that there is a genetic relationship between members of a series or that there is no such connection. Theoretically one could assume that *Eohippus, Mesohippus, Hipparion,* and *Equus caballus* are distinct and unrelated forms. Similarly one could assume that various forms of mediums of exchange, the calendar, social organization, government, etc., are discrete and unrelated. But assumptions such as these fly in the face of a great mass of evidence that indicates that one form may grow out of another. Where we can establish or reasonably assume the existence of such a process we can arrange a number of forms into a series and render a great mass of material intelligible with a single, simple formula. This is of course trite and commonplace in biology; everyone knows how evolutionist theory has explained things that were unintelligible without it.

If we assume that one form grows out of another instead of being created independently, then we may be able in many situations to reconstruct a series. We would begin, naturally, with the present, with what we have before us. Then we would arrange other forms in the series in accordance with their likeness or dissimilarity to the present form. Thus of the various forms of the horse we would put those most like the present nearest the end of the series and those most different at the beginning. Stratigraphy is often involved here, but the method is regarded as valid when the geological chronology is not known. We do not hesitate to evaluate anthropoid or hominid finds upon the basis of resemblances to ape or to man.

Lacking an established chronology would anyone question the use of this method in reconstructing a developmental series of automobiles? Would we not be justified in placing those types which most closely resemble the present forms nearest to them and those with the fewest similarities farthest down the scale? Could not one arrange a series of looms, locomotives, knives, guns, etc., in a developmental series? Do not philologists reconstruct series of linguistic forms on the basis of likenesses and differences? Certainly few would admit that banking may precede barter, or that parliaments and proportional representation might precede tribal councils. Who is willing to concede that hereditary kings might have preceded elective chiefs in the course of human history?

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manufacture of implements and vessels, agriculture, etc., the extent of scientific knowledge, the definiteness of moral principles, the condition of religious belief and ceremony, the degree of social and political organization, and so forth. Thus on the basis of compared facts, ethnographers are able to set up at least a rough scale of civilization. Few would dispute that the following races are arranged rightly in order of culture:—Australian, Tahitian, Aztec, Chinese, Italian" *(Primitive Culture,* London, 1929 printing, vol. 1, pp. 26-27).

It is interesting to note, in this connection, that although Goldenweiser repeatedly attacked the concept of evolutionary stages, he nevertheless came to feel that objection to them could be carried too far. Thus, in his last major work he says:[48]

> Take, for example, chieftainship. It is probable that one or another kind of leadership has existed in human society from the beginning, but *certainly not hereditary leadership*. Before succession in office was established or could have been thought of, there must have been leaders or officials whose office was not hereditary. . . . Sib organizations . . . *could not be regarded as primary* for the simple reason that such elements as unilateral inheritance of group membership, or sib names, *could only have developed historically*, a process which requires time. . . . The same applies, if less clearly, in the domain of religion and magic. All data indicate that the *more primitive forms* of supernatural creatures and magical devices are associated with single or at any rate simple purposes and functions . . . for fertility, protection, success in hunting or in love. . . . The *more comprehensive* forms of magical power, the *more versatile deities* encountered among the *more advanced primitives* as well as in historic times, *came into being through a process of syncretism*. . . . We cannot very well conceive of this process *as reversed*, except under very special conditions *without going both in the face of known facts and of theoretical probability* [emphases mine].

We see then that this method that the evolutionists are accused of using may in fact be the expression of an illuminating and valid principle, one that cannot be ignored without flying "in the face of known facts and of theoretical probability."

We have here a principle that recognizes cause and effect relationships and continuity, the fact that one form grows out of another. It is used as a matter of course in biology. It is illuminating and fruitful. It explains things that are unintelligible without it. It is equally valid in the realm of culture. It can be applied not only to tools, but also, as Goldenweiser recognized, to social systems, economic institutions, religion and magic, systems of mathematics, etc. And, finally, we can gain an understanding and an insight from the use of this method that is obtainable in no other way. As Tylor has put it:[49]

> No stage of civilization comes into existence spontaneously, but grows or is developed out of the stage before it. This is the great principal which every scholar must lay firm hold of, if he intends to understand either the world he lives in or the history of the past.

It goes without saying that this method must be used critically and with good sense just as would be the case of any other technique. It does not follow that

48 *Anthropology*, pp. 520-521.
49 *Anthropology* (1881), p. 20.

merely because one group of phenomena can be arranged in a genetic series that *any* class can be so treated. We could not place the Navajo, Bantu, Chinese, and Eskimo languages in an evolutionary series on the basis of their resemblances to English, any more than we could place squirrels, bears, pigs, and manatees in a developmental sequence upon the basis of their similarity to the human form.

We see, then, that mid-Victorian sex and marriage mores exerted no appreciable influence in the social theory of Morgan, Tylor, and Spencer, and, secondly, the method which they are criticized for using is a valuable and fruitful one when used critically.

With regard to progress, the evolutionists have been accused of identifying evolution with progress, of assuming that progress is inevitable, and of failure to take account of stagnation or regression in the cultural process. Thus Goldenweiser speaks of

> the weakest of the . . . evolutionary tenets . . . the notion of progress as a constant or necessary feature of evolution. . . . The evolutionist conception of progress prevailed for a long time, but with the accumulation of evidence it was recognized that regression was as common in history as progress. . . .[50]

Here again we find the evolutionists misrepresented. They did not identify evolution with progress. They did not believe that progress is inevitable. And they did recognize regression. Spencer makes himself very clear on these points:[51]

> Evolution [he says] is commonly conceived to imply in everything an *intrinsic* tendency to become something higher; but this is an erroneous conception of it. . . . Change does not necessarily imply advance. Often it is towards neither a higher nor a lower structure. Only occasionally is the new combination of factors such as to cause a change constituting a step in social evolution. . . . It is quite possible, and, I believe, highly probable, that retrogression has been as frequent as progression.

Tylor expresses the same views:

> Yet we know by what has taken place within the range of history, that Decline as well as Progress in art and knowledge really goes on in the world.[52] . . . It does not follow from such arguments as these that civilization is always on the move, or that its movement is always progress. On the contrary, history teaches that it remains stationary for long periods, and often falls back,[53] [and] development, however, is

50 *History, Psychology, and Culture*, p. 76, and "Evolution, Social" *(Encyclopedia of the Social Sciences)*, p. 660.

51 Spencer, *Principles of Sociology* (New York, 1885), vol. 1, pp. 106-109, *passim;* see also, vol. 3, p. 609.

52 *Researches into the Early History of Mankind* (2nd ed., London, 1870), p. 183.

53 *Anthropology*, p. 18.

not always progress, but may work itself out into lines of degeneration. There are certain states of society in which the going-down of arts and sciences is as inevitable a state of things as progress. . . .[54]

Morgan, too, made it clear that progress is not inevitable but can be accomplished only through specific inventions or discoveries: "The want of iron tools arrested the progress of mankind in barbarism. There they would have remained to the present hour, had they failed to bridge the chasm."[55]

He speaks of situations in which "progress may have been substantially imperceptible for centuries," and of tribes and nations perishing "through the disruption of their ethnic life."[56]

Neither did Darwin, who is often assumed to have influenced cultural anthropology profoundly, believe that progress is inevitable. "Under certain circumstances," he says,[57] "a nation will retrograde, as has too often occurred in the history of the world. We must remember that progress is no invariable rule."

Thus we see that the evolutionists did not hold the beliefs concerning progress that have been attributed to them by members of the Boas group. It would be well to set the record right on this point also.

At the beginning of this essay we stated that we would attempt to demonstrate that "evolutionary stages" and "progress" may be used as scientifically valid concepts in the interpretation of the culture process, and that therefore cultures may be evaluated in accordance with objective criteria and arranged in a series from low to high. We shall now undertake to do this.

"Evolutionary stages" means evolution, of course. By evolution we mean a process in which one form grows out of another in chronological sequence: evolution is a temporal sequence of forms. Applied to culture, this assumes (1) that elements of culture, or traits, do not exist separately and unrelated, but that they are organized into patterns or forms; and, (2), that these forms undergo change in the course of time.[58] For example, we can follow the development of axes through a series of forms. The same can be said for plows, looms, writing, legal codes, social systems, mathematics, philosophies, etc.

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54 *How the Problems of American Anthropology Present Themselves to the English Mind* (Science, vol. 4, 1884, pp. 545-551), p. 549.

55 *Ancient Society*, p. 43. 56 *Idem.*, p. 60.

57 *The Descent of Man* (New York, 1904 printing), vol. 1, pp. 142-143.

58 This appears to be Professor Lowie's conception of the evolutionist process too; for, after pointing out that the Kulturkreis anthropologists "believe in evolution," he says: "For, to recognize that culture changes in time *and* [Lowie's emphasis] to see single traits as organically related is to admit the possibility of a definite sequence" *(History of Ethnological Theory*, pp. 189-190).

Or, we can follow culture, viewed as a whole, and trace its development from a wild food basis, to a domestic food technology, to a fuel, and now, it would appear, to an atomic nuclear, technology. We can trace the evolution of culture as a whole in terms of harnessing the forces of nature: culture grows as the amount of energy harnessed per capita per year is increased. The evolution of culture is, as Kroeber once said, obvious even to the least learned.[59] Goldenweiser, although the author of numerous "refutations" of evolutionism, himself says that the evolutionist process is obvious.[60] Linton observes that "wherever one touches the stream of culture one finds evidences of 'evolution'."[60a] We still meet with ethnologists, however, who insist upon holding to an anti-evolutionist point of view.

If one simply refuses to recognize and admit the existence of an evolutionist process in culture, then naturally he cannot admit stages of development. For those who recognize that one form grows out of another, the concept of stages will be found useful as a descriptive, interpretative, and evaluative device. Thus, the successive forms of the axe—the various techniques of stone manufacture, of hafting, of metallurgy, etc.—serve to mark off steps in the development of a tool for chopping from the first crude forms in stone to the highly tempered steel axe of the present day. Similarly, stages can be distinguished in the development of weaving; Kroeber, for example, recognizes seven stages in the development of this art in aboriginal America.[61] Lowie recognizes stages of social evolution in his discussion of the clan.[62] Stages can be distinguished also in the development of writing, money, mathematics, medicine, in social evolution, etc. Stages are merely the succession of significant forms in the developmental process.

"Progress" may have two slightly different but nevertheless related meanings. It may mean nothing more than advance of a process which moves in accord-

59 *The Superorganic* (American Anthropologist, vol. 19, pp. 163-213, 1917), p. 164.

60 " . . . The rejection of the evolutionary theory as a specific formulation of the developmental process does not imply that there is no development in civilization. It is, in fact, apparent that the very opposite is the case" *(Four Phases of Anthropological Thought,* Papers and Proceedings, American Sociological Society, vol. 16, p. 65, 1921).

60a "Error in Anthropology" (in *The Story of Human Error,* Joseph Jastrow, ed., New York, 1936), p. 315.

61 *Anthropology,* pp. 360-361.

62 "Clans do not arise in the very earliest stage of society, but on somewhat higher levels . . . " *(An Introduction to Cultural Anthropology,* p. 256); "What is true of the sib scheme in full swing cannot possibly be true of the nascent sib. . . . The Greeks are known to have passed through a period in which they were organized into sibs. But this may simply indicate that at a certain level the sib system tends to decay" *(Primitive Society,* pp. 162, 147); clans "ultimately disappearing under a strong centralized government" *(An Introduction to Cultural Anthropology,* p. 256.).

ance with a principle other than mere chance. It may also mean advance toward "better" or "higher" or "lower" states. Thus, we may say that an insect crawling on the ground is making progress when he proceeds from point A to B. Or, one might say that a star becomes progressively hotter or a man progressively weaker. A disease may progress until the organism attacked by it dies as a consequence. Here we mean by progress a continuation of a process. But we may also mean by progress the attainment of stages or positions in succession, each of which is higher or better than the preceding. Both of these conceptions of "progress" are applicable to culture, each may be employed to illuminate the process of culture change and to render it intelligible.

Suppose we have a series of art forms which we designate *a, b, c, d,* etc. One form grows out of the preceding forms; we can trace their development from *a* to *d,* through *b* and *c*. We might properly say, therefore, that the art had progressed from *a* to *d* without however claiming that *d* was a better or higher form than *a*. The same could be said of word forms.

But this is not what is usually meant by progress in culture change as a whole. As the term is ordinarily used, progress means movement toward higher or better states, or both. This concept, too, is applicable to culture change and development. We are now face to face with the question of criteria, and it is at this point that the anti-evolutionists of the Boas group lose their bearings and finally give up the attempt altogether.

Boas and a number of his students admit that one can legitimately speak of progress in the sense of "better" in matters of technology and knowledge, but argue that the concept is inapplicable to social, philosophic, and ethical systems, etc. Thus Boas says:[63]

> . . . We may recognize progress in a definite direction in the development of invention and knowledge. . . . It is not easy to define progress in any phase of social life other than in knowledge and control of nature. . . . It is difficult to define progress in ethical ideas. It is still more difficult to discern universally valid progress in social organization, for what we choose to call progress depends upon standards chosen. The extreme individualist might consider anarchy as his ideal. Others may believe in extreme voluntary regimentation; still others . . . [etc.].

Lowie, too, admits that one may legitimately say that one tool is better than another: "it is a purely objective judgment that metal axes are superior to those of stone." But, he goes on to argue,

63 *Anthropology and Modern Life* (New York, 1928), pp. 213-214, 219-220. See, also, "Anthropology" *(Encyclopedia of the Social Sciences)*, vol. 2, p. 103; "Methods of Research" (in *General Anthropology*, F. Boas, ed.), pp. 676-678.

the appraisal of social features is *wholly different* from that of technological features of culture. The latter may be rated according to the closeness with which they accomplish known ends; the former have *unknown ends* or ends whose value is a matter of philosophic doubt, hence they can be graded *only on subjective grounds* and must scientifically be treated as *incommensurable*. . . . In the sphere of social life *there is no objective criterion for grading cultural phenomena*[64] [emphasis ours].

He has expressed essentially the same view in one of his most recent works, the revised edition of *An Introduction to Cultural Anthropology*:[65] "The purpose of an ax is to fell trees; but what is the purpose of art, communal life, belief, marriage?"

Goldenweiser[66] and Herskovits[67] also express the same view.

Their position is interesting. It implies a number of assumptions: (1) that a portion or an aspect of culture can be evaluated apart from the cultural whole or *not at all;* (2) that sociological features have "unknown ends," which presumably means that we do not know what their functions are; and (3) that such things as forms of government, ethical codes, religious beliefs, etc., are to be evaluated, if at all, in terms of the opinions and preferences of tribesmen and citizens. Let us examine them in turn.

Goldenweiser asks, "Is Christianity . . . superior to Mohammedanism, Judaism, or Confucianism? Yes or no according to who you are, or what you believe in."[68] Boas and Goldenweiser both point out that one person may prefer anarchy, another dictatorship or democracy, etc.[69] Both ask if one ethical system can be said to be higher or better than another. This point of view implies that an aspect or a part of a culture can be evaluated apart from the whole or *not at all.* This is like asking, which is better, fur, feathers, or scales? Or, which is better, a duck's foot or the foot of a eagle? These are hardly sensible questions. Fur is "better" for a mammal, feathers "better" for a bird, and scales "better" for a fish. The webbed foot is better for a duck than one with talons like an eagle's. The moral of all this is that things of this sort cannot be compared and evaluated *against each other and apart from their organic contexts.* So it is with religions, forms of government or the family, ethical codes, etc. These are means of organizing relationships between individual

64 *Primitive Society*, pp. 439, 438.

65 New York, 1940, p. 373.

66 *Anthropology*, p. 524, and many of his earlier works in which the theory of evolution is criticized.

67 *The Economic Life of Primitive Peoples* (New York, 1940), pp. 7-8.

68 *Anthropology*, p. 524.

69 Boas, *Anthropology and Modern Life*, p. 220; Goldenweiser, *Anthropology*, p. 524.

members of a society on the one hand and between society and its habitat on the other. The means will naturally vary with circumstances; means suitable to one situation will be unsuited to another. There is and can be no absolute standard in terms of which all forms of government, ethical systems, religions, forms of family, etc., can be measured or evaluated. They are not relative to each other; each is relative to its own situation. It is meaningless to ask, which is better, a hammer, shovel, needle, canoe or bicycle. It all depends upon what you need and want. An ethical code that works well among preliterate hunters might—and almost certainly would—be out of place in highly developed agricultural, or industrialized, communities. A religious system suited to a pastoral life would not fit a seafaring and horticultural people such as the Polynesians. We see, then, that it is unjustifiable to attempt to compare the same non-technological aspect of a number of different cultures with each other and to evaluate them against each other apart from their respective contexts, the cultural *wholes*. And to declare that the concept of progress is inapplicable to non-technological elements of culture because such an attempt at evaluation fails is to commit an unfortunate error.

Let us now consider the Boasian thesis that non-technological elements of culture have "unknown ends," that they are purely subjective affairs[70] and therefore "must scientifically be treated as incommensurable" (Lowie). It seems almost incredible that an anthropologist could today ask the question that Lowie has recently posed: "The purpose of an ax is to fell trees; but *what is the purpose of art, communal life, belief, marriage?*" To ask such a question is to imply that these aspects of culture are mysterious and incomprehensible. Ethnology would indeed be in a sad plight if it could throw no light upon this matter. Fortunately, the situation is not as obscure and hopeless as Lowie's query would suggest. Actually we know a great deal about the purpose, or *function*, of such things as "art, communal life, belief, marriage."

Man is an animal, and like all other animals he strives to live, to perpetuate his kind. He endeavors to make life secure and enduring. Culture is man's own way of carrying on the struggle for existence. It is a means of obtaining need-serving materials from nature, a means of defending one's self and one's group against enemies, a means of combatting disease, of finding protection from the elements, etc. We may distinguish technological, sociological, and philosophic aspects of culture, but all have a common purpose and a common goal: the security and continuity of life. Social systems are social means of operating

70 "The problem," says Goldenweiser, "passes from the domain of measurement to that of value, from that of objectivity to that of taste and opinion" (*Early Civilization*, p. 14).

technological systems; one type being geared to a hunting technology, another to a fishing, agricultural, pastoral, medical, military, etc., technology. Philosophies (using this term in a broad sense to embrace the sum total of thought and belief of a people) also are means of carrying on the struggle for existence on all fronts: subsistence, military, medical, morale, etc. Social solidarity is important too in the struggle for existence, and we find institutions—clubs, societies, kinship systems, clans, ceremonial groups, etc.—myths, lore, legends, art forms, rituals, fetiches, etc., working to build morale, to strengthen group solidarity. Recreation and diversion in games and in the arts build morale; they give zest to life and make it seem worth while; they comfort, soothe, inspire, and encourage. Human beings have to be related to each other in an effective manner in order to carry on the business of life successfully. Social, political, ethical, artistic, ecclesiastical, and educational systems operate to accomplish this purpose. They are means of coördinating, integrating, regulating, and directing human endeavor toward the goal of all life: a secure and agreeable existence.

The thesis set forth here is not novel by any means. Anthropologists of the Functionalist schools have made it almost commonplace. Thus Radcliffe-Brown states that: [71]

> One of the tasks of culture is to organize the relations of human beings to one another. This is done by means of the social structure and the moral, ritual and economic customs by and in which that structure functions. But another task of culture is to organize the relation of man to his environment.

He shows that totemism is a means both of organizing "the relations of human beings to one another" and of organizing "the relations of man to his environment." Similarly, Malinowski repeatedly exhibits culture as "the means of satisfying his [man's] wants and of mastering his surroundings." [72]

> The most important thing about culture [he says] is that it allows man to satisfy his primary requirements, that is, his need of food, security, protection from the weather, from surrounding dangers, as well as his need of procreation.[73]

Thus we see that the purpose and object of nontechnological aspects of culture are not as mysterious or as subjective as they appear to the Boasians. The purpose of culture, in its several aspects as well as a whole, is to make life secure, perpetual, and worth-while. We might not be able to say that the ethical code, religion, or form of family of the British who colonized Tasmania was any

71 *The Social Organization of Australian Tribes* (Oceania, vol. 1, 1930), p. 63.
72 "Social Anthropology" *(Encyclopedia Britannica,* 14th ed.), vol. 20, p. 864.
73 Introduction to H. Ian Hogbin, *Law and Order in Polynesia* (London, 1934), p. xxxi.

"better" in and of itself than that of the aborigines they found there. But we can certainly say that the beliefs, ethics, family form, etc., of the invaders were integral parts of a culture that was far superior to that of the poor blacks they exterminated. Cultures—as means of carrying on the struggle for existence—can be compared with each other and evaluated. Their ethical, political, familial, and other aspects, considered apart from cultural wholes, cannot be so treated.

The assumption that the only way in which non-technological aspects of culture could be evaluated would be to compare an aspect of one culture with the corresponding aspect of another—e.g., ethical code of culture *A* with the ethical code of culture *B*—is, however, quite in keeping with the Boasian conception of culture. During the later years of his life Boas learned to say that "culture is integrated." We find an explicit statement to this effect in *The Aims of Anthropological Research* (1932).[74] Two years later he dwelt upon integration in culture in his introduction to Benedict's *Patterns of Culture*. And in *General Anthropology* (1938), he remarks that "notwithstanding incongruities that are never entirely absent, each culture is a whole. . . . It seems most desirable and worth-while to understand each culture as a whole. . . ."[75] In his earlier years, however, Boas expounded the "thing of shreds and patches, planless hodge-podge" view of culture. Benedict, too, once expressed this view clearly and explicitly:[76]

> It is, so far as we can see, an ultimate fact of human nature that man builds up his culture out of disparate elements, combining and recombining them; and until we have abandoned the superstition that the result is an organism functionally interrelated, we shall be unable to see our cultural life objectively, or to control its manifestations.

It was the rejection of evolutionism by the Boas group that was largely responsible for their "chaotic jumble" conception of culture. Sapir tells us how "the older schematic evolution . . . relapsed into the proverbial chaos of history"[77] after the attack by the Boasians. This is the theme of Lowie's *Primitive Society*, as Herskovits and Willey have pointed out:[78]

74 Science, vol. 76, pp. 605-613, 1932, p. 612.

75 "Methods of Research" (in *General Anthropology*, F. Boas, ed.), pp. 673, 680.

76 *The Guardian Spirit in North America* (Memoirs, American Anthropological Association, no. 29, 1923), pp. 84-85.

77 "Anthropology and Sociology" (in *The Social Sciences and Their Interrelations*, Wm. F. Ogburn and A. Goldenweiser, eds., New York, 1927), p. 100.

78 Melville J. Herskovitz and Malcolm M. Willey, *The Cultural Approach to Sociology* (American Journal of Sociology, vol. 29, pp. 188-199, 1923), p. 198, footnote 1.

Nowhere, perhaps has this element of lack of uniform cultural development among social groups been brought out more strongly than in *Primitive Society*, by Robert H. Lowie, to whom in consequence, civilization appears as a "planless hodgepodge," and a "thing of shreds and patches."

With such a conception of culture it was quite natural that the Boas group should think that the only way to evaluate such things as forms of government, religions, ethical codes, etc., would be to compare one directly with another. If culture is but a jumble of "disparate elements," if it is a "superstition" to believe that culture "is an organism functionally interrelated," then of course non-technological features of culture might well appear to have "unknown ends" and to be considered "scientifically incommensurable." It is only when culture is seen as an integrated system that the function—and "end"—of non-technological features can be understood and evaluated.[79]

We turn now to the last of the three assumptions that underlie the Boasian conception of grading, or the possibility of evaluating, non-technological elements or aspects of culture. As Boas and Goldenweiser have remarked, some will prefer anarchism, some fascism, and still others democracy; some will prefer Judaism, others Christianity or Mohammedanism. Who can say, therefore, that one is better than another? Lowie, too, observes that in such fields it is impossible to find a "norm that would be accepted by all men."[80]

79 It is interesting to note that Benedict, like Boas and some other members of the group, came eventually to an appreciation of integration in culture, to embrace, in fact, the "superstition" that culture *is* "an organism functionally interrelated." In 1934, she wrote: "It is obvious that the sum of all the individuals in Zuni make up a culture beyond and above what those individuals have willed and created. . . . It is quite justifiable to call it an organic whole" *(Patterns of Culture,* p. 231).

We suspect that the influence of the Functionalist schools of Malinowski and Radcliffe-Brown during the late 1920's and early thirties had much to do with this change of faith among the Boas group. Mrs A. W. Hoernlé finds that Boas was "compelled to recognize the functional point of view . . . almost in spite of himself and, as it were, against his will." She points out that Boas' "cultural dynamics," which he emphasized in his later years, is nothing but Functionalism under another name *(New Aims and Methods in Social Anthropology,* South African Journal of Science, vol. 30, pp. 74-92, 1933, pp. 82-83).

As I see it, the Boas group greeted the intrusion of Functionalism into American ethnological theory with harsh criticism and not a little derision. But as Functionalism began to gain converts and make headway against the atomistic and negativistic philosophy of the "American Historical School" Boas (and some of his students, notably Ruth Benedict) changed his tune. He now began to preach "cultural dynamics": how necessary it was to understand how cultures work, how we must understand cultures as integrated wholes, etc. But he did not call this Functionalism, nor admit that what he was advocating bore any resemblance to the Functionalist schools of that time. "Cultural Dynamics" was presented as a distinctive contribution of Boas. It was however merely Functionalism under the Boasian trade name, put on the "market" to meet the competition of rival schools.

80 *An Introduction to Cultural Anthropology* (1940 edition), p. 373.

This is indeed a curious position to take. Who is to judge in scientific matters, the scientist or the folk? People may disagree on the proper way to treat trachoma, but if some are trained physicians while others are preliterate savages, is equal weight to be given to all views? Which is to be the judge of foods, the science of nutrition or folk custom and prejudice? Suppose that ten persons claim that a charm will prevent malaria for everyone who advocates the use of screens and mosquito-killer; suppose that ten million "prefer" democracy, only one thousand vote for anarchy; four hundred million pledge allegiance to Buddhism, only ten million to Judaism—what does all this prove or mean? The values of medicines, machines, organizations, philosophies, etc., in the conduct of the life of man as an animal species, are not to be ascertained by appeal to the opinions of laymen or even by taking a poll among experts. They are to be gauged by *objective measurement*. It is curious that Boas, Lowie, Goldenweiser, et al., should be willing to place the opinions, tastes, and preferences of tribesmen and laymen—which after all are culture traits themselves, data of anthropological inquiry—on the same plane as the investigations and conclusions of the scientific anthropologist.

We will now state our own position on evolutionary stages, progress, and the evaluation of cultures. (1) Culture evolves; one form grows out of another. There is form and continuity in the culture process. A clan, an alphabet, a telescope, a language, a king, or a table of logarithms does not "just happen"; each grows out of previous organizations of cultural elements. (2) An evolutionary stage is simply one of a succession of forms in the developmental process. Clan organization for example represents a stage of social evolution. "Clans do not arise in the very earliest stage of society, but on somewhat higher levels . . . ultimately disappearing under a strong centralized government" (Lowie).[81] Similarly the keystone arch, the plow, a symbol for zero, representative government, antiseptics, relativity, etc., represent stages of cultural development. (3) We may properly speak of progress in cultural development not only in the sense of more recent forms in the successive series but also in terms of higher and better.

A culture is, as we have seen, a means of adjustment, regulation, and control.[82] Means vary; some are better than others. "Superior" and "inferior" are measured in terms of security and survival. We can measure cultures by a num-

81 *Introduction to Cultural Anthropology* (1934 edition), p. 256.

82 This view has, of course, been held by many scholars. Thus, Herbert Spencer says that "human progress is measured by the degree in which simple acquisition is replaced by production; achieved first by manual power, then by animal-power, and finally by machine

ber of objective and vitally significant indexes: amount of food and other human-need-serving goods produced per unit of human labor; infant mortality; death rates for various diseases; life expectancy, etc. The best single index, however, by which all cultures can be measured, is *amount of energy harnessed per capita per year.*[83] This is the common denominator of all cultures. In the earliest stages of cultural development man had only the energy of his own body under his control and at his disposal for culture building. Later he harnessed solar energy in the form of cultivated plants. He domesticated animals. Then the energy of fuels was harnessed in engines. And now the nucleus of the atom has been tapped for new and additional energy resources. Culture advances as the amount of energy harnessed per capita increases. The criterion for the evaluation of cultures is thus an objective one.[84] The measurements can be expressed in mathematical terms. The goal—security and survival—is likewise objective; it is the one that all species, man included, live by. Thus we are able to speak of cultural progress objectively and in a manner which enriches our understanding of the culture history of mankind tremendously. And finally,

(4) We can evaluate cultures and arrange them in a series from lower to higher. This follows, of course, from the establishment of a scientifically valid criterion of value and means of measurement.

We come now to a most interesting point. Although the Boasians reject the

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power" *(Principles of Sociology,* New York, 1897, vol. 3, p. 362). Morgan pictured progress as a process carried forward by inventions and discoveries leading to greater technological control over nature, especially with regard to the mode of subsistence *(Ancient Society).* Radcliffe-Brown thinks of progress as "the process by which human beings attain to greater control over the physical environment through the increase of knowledge and improvement of technique by inventions and discoveries" *(On Social Structure,* p. 11). The distinguished physicist, R. A. Millikan, likewise defines progress as "the increasing control over environment" *(Evolution in Science and Religion,* New Haven, 1927, p. 42).

83 See Leslie A. White, *Energy and the Evolution of Culture* (American Anthropologist, vol. 45, pp. 335-356, 1943) for a more extensive discussion of this point.

84 One must distinguish between "subjective" and "arbitrary" standards of measurement. All standards are arbitrary and man-made. But it does not follow that they must also be subjective. Inches, hours, pounds, acres, etc., are wholly arbitrary units of measurement. But they are not subjective. Any number of persons can measure a table with a yardstick, or weigh a stone with a scales, and get the same answer—within the range of operational variations. The personal factor is eliminated. We therefore call the measurements *objective. Subjective* measurements or evaluations are those in which the psyche of the measurer is also the standard of measurement. Thus one may say that life is good while another declares it to be bad.

The confusion of "arbitrary" with "subjective" may have led members of the Boas group—and others—to reject all attempts at cultural evaluation. Our criteria of measurement and evaluation are arbitrary as they must be in all fields of science—in physics as well as in culturology. But they may be just as objective in the science of culture as in physics or physiology.

concept of stages, find the concept of progress inapplicable except to technologies, and declare that cultures cannot be evaluated, very few of them live up to the principles they profess to hold. Thus we find that many of them continually speak of stages or levels of development, of cultural advance, of advanced, higher and lower cultures, etc.

Boas speaks of "stages" of culture in articles extending over a considerable period of time. Thus, to cite a few examples, in *Ethnological Problems in Canada* (1910) we find "stages of civilization" and "stages of culture";[85] in *The Primitive Mind and the Present Hour* (1917), "when tribal society advances to such an economic stage";[86] in *The International State* (1919), "on all cultural levels," "with the rise of the general cultural level";[87] in *The Mind of Primitive Man* (1938), "highest stage of civilization," "a high stage of political organization," "a certain stage of cultural development."[88] Goldenweiser says that "clan systems may represent relatively high and low stages of social development."[89] Lowie speaks of "stages of lesser advancement," "a lower level of civilization"[90] and in one of his most recent works he has a chart which might have been taken from the work of one of the old-fashioned evolutionists. It shows a series of stages (Lowie calls them "eras in culture history") of cultural development: Savagery or Old Stone Age, Dibble and Hoe Farming or New Stone Age, Copper Age, Bronze Age, and Iron Age.[91] In another place in the same work he speaks of "Australia illustrates both *stages of development*"[92] (emphasis mine). Benedict refers to "cultures at every level of complexity."[93]

With regard to progress, Boas finds it in political as well as in technological evolution, and, it appears, in culture in general. Each of "these early inventions," he says in speaking of African cultures, "represents a giant's stride forward in the development of human culture."[94] In social evolution, according to Boas,

> the whole development of mankind shows that this condition [i.e., a "federation of nations"] is destined to come. Progress has been slow, but almost steady, in the direction of expanding the political units from hordes to tribes, from tribes to small states, confederations, and nations.[95]

85 Reprinted in *Race, Language, and Culture* (New York, 1940), p. 341.
86 Reprinted in *Race and Democratic Society* (New York, 1945), p. 128.
87 *Idem*, pp. 142, 144. 88 Pages 142, 144.
89 Review of Durkheim, *Les formes élémentaires de la vie religieuse* (American Anthropologist, vol. 17, pp. 719-735, 1915), p. 723.
90 *Primitive Society*, pp. 1, 17.
91 *Introduction to Cultural Anthropology* (2nd ed., 1940), pp. 10-11.
92 *Idem*, p. 265. 93 *Patterns of Culture* (Cambridge, 1934), p. 48.
94 *Race and Democratic Society*, p. 63.
95 *Race and Democratic Society*, p. 111. This is a theme that runs through many of Boas' writings; see, also, pp. 100, 127, 180, of work just cited; also, *Anthropology and Modern Life* (1928), pp. 97-99.

Not only does he recognize the evolutionist process here, he declares it to be inevitable: "The practical difficulties that seem to stand in the way of the formation of still larger units count for nought before *the inexorable laws of history*"[96] (emphasis ours).

With regard to "progress" and "higher" (or "advanced") and "lower" cultures, the following usages by members of the Boas group may be noted. Boas contrasts "primitive culture" with "more advanced types of civilization"[97] (1908); he speaks of an "area of more advanced culture," the "well-advanced tribes of Northwest America," "people in an advanced stage of civilization"[98] (1911); "the higher civilizations that were built up . . . in Mexico"[99] (1912); "tribes of more advanced type of culture," "more advanced types of society"[100] (1912); "more advanced type of culture," "more advanced types of society"[101] (1928); "in the poorest cultures, in which the whole energy of every individual is required for the acquisition of the barest needs of life . . . and in which no division of labor has developed,"[102] "in the Middle Ages the civilization of the Arabs and Arabized Berbers had reached a stage of development which was undoubtedly superior to that of many European nations of that period"[103] (1938). Thus we see that throughout a period of thirty years, Boas repeatedly recognizes progress, and higher and lower cultures.

In *Primitive Society* Lowie speaks of "higher" and "lowest known cultures" (pp. 68, 182); also, "the highest known civilizations, like those of the Chinese, the ancient Greeks and our own" (p. 182). In *Are We Civilized?*[104] we find

> In some of the African monarchies several million people were thus governed by the all-controlling force of a ruler and his ministers. How advanced all this appears alongside of the lowly Crow system!"

We also read of "ruder" and "higher hunters" and "the advanced Peruvians and Mexicans" in the same work. In his article "Social Organization"[105] Lowie speaks of "ruder societies," "rudest people," "simpler cultures," and "more advanced peoples" (pp. 142, 143, 146). And in one of his most recent works,

96 *Race and Democratic Society*, p. 100.
97 "Anthropology" (in *Lectures on Science, Philosophy and Art*, Columbia University, 1908), p. 25.
98 *Mind of Primitive Man* (1911), pp. 183, 184.
99 *The History of the American Race* (reprinted in *Race, Language, and Culture*), p. 329.
100 *Race and Democratic Society*, p. 99.
101 *Anthropology and Modern Life* (1928), pp. 95, 96.
102 *The Mind of Primitive Man* (1938), p. 203.
103 *Idem*, p. 13.
104 New York, 1929, pp. 152, 149.
105 In *Encyclopedia of the Social Sciences*, 1934.

the second edition of *An Introduction to Cultural Anthropology* (1940), we learn that "even the Badarian level was infinitely beyond that of recent Australian and Fuegian hunters, who knew nothing of pottery and farming, being thus more than seven thousand years behind the ancient Nile dwellers," and "the Shilluk have been close enough to the centers of higher civilization" (pp. 10, 481). In *American Culture History*[106] (1940), Lowie says "most ethnographers would place the Pawnee above the Omaha and the Omaha above the Teton," which is, we would say, grading cultures on a fairly fine scale.

Goldenweiser evaluated cultures frequently. In *The Social Organization of the Indians of North America*[107] (1914), he speaks of "higher cultures." In *Early Civilization* (1922), despite his demonstration (on pp. 125-127) that a certain group of five tribes, ranging from the Arunta to the Baganda, cannot be arranged in a series from low to high, he speaks of "primitive tribes, including the lowest" (p. 408), "the crude culture of the Australians . . . , a higher civilization" (p. 315), and "among primitive tribes pots are made by hand, but among tribes on a higher civilization level . . . " (p. 317). And in his last major work, *Anthropology* (1937), he speaks of "the higher Indian civilizations of Peru, Mexico" (p. 427), "White American farmers . . . with their higher culture" (p. 488).

In various works Sapir, too, speaks of "higher" and "lower levels";[108] contrasts "the most primitive tribes" with those "culturally furthest advanced";[109] alludes to "obviously less primitive" and "a high level of culture."[110]

Herskovits avoids "higher" and "lower" in characterizing cultures—although he does speak of "the crudest civilizations."[111] He does however evaluate them freely in terms of complexity and of strength. Thus he frequently alludes to "the non-literate but complex West African culture of Dahomey," the "most complex political . . . organizations . . . in North America," the "great political groupings of Africa and Indonesia as well as . . . the humbler, less complex societies . . .," etc.[112] He also speaks of "the clash of cultures of unequal strength."[113] He thus evaluates cultures but avoids the "sin" of evolutionism.

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106 American Anthropologist, vol. 42, pp. 409-428, 1940, p. 413.
107 Journal of American Folk-Lore, vol. 27, pp. 411-436, 1914, p. 436.
108 Review of R. H. Lowie, *Primitive Society* (The Freeman, vol. 1), p. 378.
109 Review of R. H. Lowie, *Primitive Society* (The Nation, vol. 111), p. 47.
110 *Anthropology and Sociology*, pp. 100, 109.
111 *Man, the Speaking Animal*, p. 69.
112 *The Economic Life of Primitive Peoples*, pp. 422, 438, 442.
113 *Applied Anthropology and the American Anthropologists* (Science, vol. 83, pp. 215-222, 1936), p. 222.

Margaret Mead, too, recognizes three levels of integration of culture—the simplest forms, corporate societies, and political societies—borrowing this distinction, as she indicates, from Radcliffe-Brown.[114] She thus grades cultures according to levels of integration, and since Radcliffe-Brown defines evolution as "the passage from an integration of a lower and simpler type to one of a higher and more complex type,"[115] these levels of integration are stages of evolutionary development.

Thus we see that Boas and some of his most prominent students have not adhered very closely to the "democratic belief in the equality of cultures" proclaimed by Margaret Mead. To be sure, they have argued so often that cultures cannot be graded that Herskovits has hailed the "recognition of the impossibility of evaluating cultures" as "a great advance toward clarity of thought." But, unfortunately for clarity of thought, Boas, Lowie, Goldenweiser, Sapir et al were unable to live up to their egalitarian principles. They seem to have been quite unable to refrain from grading cultures; in fact, they evaluated them repeatedly for decades.

Why Boas and his disciples have declared themselves opposed to such concepts as stages, progress, and "higher and lower" cultures, and yet have used them extensively, is a question that they or those who carry on their tradition should perhaps answer. Our theory is that, for reasons which we cannot go into here, they were definitely opposed to the theory of cultural evolution as a matter of principle. This committed them perforce to the rejection of stages, progress, and the evaluation of cultures. Whenever they dealt with matters of theory or principle in ethnology they gave full allegiance to their anti-evolutionist philosophy. But when it came to interpreting cultural phenomena themselves as they observed them, they could not avoid using these concepts. The evolutionist character of culture change simply forced itself upon them by sheer weight and, for the time being, pushed their anti-evolutionist scruples aside. This is why Sapir could find some tribes "*obviously* less primitive," why Goldenweiser characterized the cultures of Mexico and Peru "higher," why Lowie was able to place Badarian culture "infinitely beyond that of Australian hunters," and why Boas ranked the civilization of the Arabs of the Middle Ages above that of European nations of the period.

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114 *Coöperation and Competition among Primitive Peoples* (New York, 1937), p. 467.

115 Review of D. S. Davidson, *The Chronological Aspects of Certain Australian Social Institutions* (Oceania, vol. 1, pp. 366-370, 1930), p. 370.

There have been, as I have pointed out elsewhere,[116] a number of unfortunate consequences of the theoretical position taken by Boas upon a number of important matters. It is particularly unfortunate that he and his disciples have rejected the theory of cultural evolution so vigorously and so thoroughly, for it has tended to deprive ethnology of one of science's most fundamental and vitalizing conceptions. Without the evolutionary principle culture history can appear to be nothing other than the chaotic jumble, the planless hodge-podge, that some members of the Boas group see in it. With the repudiation of evolution went also the rejection of such useful concepts as stages, progress, and the idea that cultures can be evaluated. There are signs however that a certain amount of dissatisfaction with the prevailingly negativistic attitude of the Boas school exists among American anthropologists today, particularly among the younger scientists. Indeed, Goldenweiser himself, after writing critiques and refutations of evolutionism for almost a quarter of a century, said in his last major work:[117]

> Perhaps too eagerly absorbed in the process of tearing down evolution, we have been tempted to neglect the positive leads left behind by this school of thought. There is much room here for constructive work yet to be done.

There is much to be done indeed. We may hope that a reconsideration of philosophic points of view may lead to a revival of evolutionism in the science of culture. When this takes place "stages" and "progress" will again take their place as valid and useful scientific concepts.

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116 See, especially, *Diffusion vs. Evolution: an Anti-Evolutionist Fallacy* (American Anthropologist, vol. 47, pp. 339-356, 1945) and *Kroeber's 'Configurations of Culture Growth'* (American Anthropologist, vol. 48, pp. 78-93, 1946).

117 *Anthropology*, p. 521.

ISLAM AND CLAN ORGANIZATION AMONG THE HAUSA

JOSEPH H. GREENBERG

INTRODUCTION

ONE OF THE RESULTS of the conversion to Islam of the Hausa-speaking peoples of the western Sudan has been the loss of their aboriginal clan organization. The former existence of these units among the mass of Hausa before conversion is indicated by their existence in full vigor among the small groups of pagan Hausa still surviving, the presence of similar groupings among the close linguistic and cultural relatives of the Hausa, and certain widespread survivals of cultural elements connected with clan organization among the Moslem Hausa.[1]

The data on which this study is based consist of material from groups recently converted from paganism, a study of the fully functioning clan organization of the pagan Hausa, and observation of the social organization of the Moslem Hausa, both urban and rural. While field observation was confined to the Emirate of Kano, whose capital, the city of Kano, is the largest center in Hausa country, the fundamentals of the process were presumably similar throughout the Hausa-speaking area.

In view of the lack of explicit condemnation of clan organizations in Moslem law, their disappearance among the Hausa poses a problem. This problem is pointed up by the survival of extended kinship groupings, the tribe and subtribe, among the Arabs in Arabia itself and elsewhere up to the present day. Likewise the Berbers, whose contacts with Islam begin in the 7th century AD, have preserved their tribal organization. There are, it is true, important differences between the Arab and Berber units on the one hand and the African on the other, notably the prevalently endogamous nature of the former as contrasted

1 The field data utilized here were obtained in the course of one year's ethnographic research among the Hausa of Northern Nigeria (1938-1939) as a Field Fellow of the Social Science Research Council. The present study is part of a program of research on problems of Moslem-Negro acculturation in West Africa being carried out with the assistance of a Demobilization Award of the same organization. I am indebted to Richard K. Beardsley for helpful advice and criticism.

with African clan exogamy. Nevertheless, the issues raised by the contact of all these kinship groupings with Islam is so similar in broad outline that the disappearance of clans among the Hausa, whose contact with Islam is relatively recent, calls for examination.

THE INSTITUTION OF THE CLAN AMONG THE PAGAN HAUSA

According to the 1921 decennial census, of the 3,443,207 inhabitants of Kano Emirate, 120,149 were pagan. Any consideration of the culture of these pagans should be prefaced by the statement that their culture has been fundamentally modified by continuous contact with the surrounding Moslem Hausa. The process has advanced so far that the pagan culture must at present be considered a sub-culture, politically dependent and only in certain aspects distinct from the neighboring Moslem culture.

The pagan Hausa of the Kano countryside draw their chief subsistence from agriculture. Hunting, which formerly possessed some economic importance, has virtually disappeared with the clearing of the forests, and pastoral pursuits are left in the hands of cattle Fulani. At the base of the patrilineal, almost exclusively patrilocal clan organization, is the extended patrilineal household, the basic landowning group. A clan is viewed as a collection of such households, each of which occupies a single compound. The household is composed of a core of males related in the patrilineal line and their wives and children. A daughter of one of the males and her husband may be included in the infrequent instances of matrilocal residence. In former times, slaves were also found, virtually incorporated into the household as son or son-in-law of the compound head.

The patrilineal core of the household varies in membership according to circumstances. It is a rare, and scandalous, situation for a son to leave his father's compound during the latter's lifetime in order to form a new compound, but after the father's death, his sons may separate. In practice, however, the brothers generally stay together under the undisputed headship of the oldest one and this is the socially approved solution. A brother may at any time claim his equal share in the inherited land and found a new household. In some instances cousins related only through a common grandfather or even great-grandfather inhabit one large compound of as many as 100 people, but sooner or later such groups break up because of their unwieldiness and through a lack of sufficient arable land in the vicinity, giving rise to new households.

The land cultivated by members of the same compound is considered to belong to the patrilineal core collectively. The compound head is merely the administrator with well-defined privileges and obligations. Everyone of adult age

must work on the communal land, the gandú',[2] on Monday, Tuesday, Wednesday, and Thursday of each week. On the remaining days the subordinate males and the wives of the compound heads are free to work on private plots, known as gayáwna', temporarily alienated from the communal land. Still smaller plots, gayángayán, are assigned to wives of subordinate males and to circumcized males not yet married. The grain raised on the communal land is said to belong to the compound head and is stored in a granary near the compound head's hut. The consumption of their corn is delayed as long as possible into the dry season and, if possible, through the next harvest. It should be sold and the proceeds used to pay the bride price for wives for the compound head and other members of the nuclear patrilineal group. In addition, the compound head has the responsibility of providing farm equipment and seed to the other members of the compound.

Women freely participate in all except the most arduous farm tasks. Though not members of the in-group, they are free to earn an independent income from the sale of non-consumption crops and surplus grain from their assigned plots, and have an additional source of income from domestic animals which they own, and through the universal feminine occupation of the domestic spinning of cotton. An addition to the obligation of the private plot (gayáwna') owners to feed their husband, the compound head, all the women must provide for their own clothing and that of their infant and adolescent children.

Members of the same clan claim common descent in the patrilineal line. The clans are not large, averaging perhaps ten compounds. Through the budding off process described above, there is a tendency for compounds of the same clan to be concentrated in the same area. This rough localization is much disturbed by migrations, so that most clans are widely scattered with one or several foci of concentration. Sometimes a single clan dominates a district, often, in this case, giving it its name. More frequently there are a number of clans all fairly equally represented. In general, the pagan Hausa do not concentrate in villages, and

2 The transcription of Hausa employed here is, except for the changes described below, the same described in *Some Problems in Hausa Phonology* (Language, vol. 17, pp. 316-323, 1941). The following purely notational changes have been made:

1. Simple k, g, ƙ, for k^y, g^y, and $ƙ^y$ before e, e', i and i' and for k^w, g^w, and $ƙ^w$ before o, o', u, u'. The analysis of its palatal and velar series as separate phonemes remains, but the transcription is simplified by eliminating the superscripts in positions where no contrasts exist.

2. The low tone is indicated by the absence of a tonal mark over the vowel instead of the grave accent as formerly.

3. Both implosives and ejectives are indicated by italic letters instead of apostrophes before and after respectively. No ambiguity results since all the fortis sounds are ejectives and all the lenis sounds are implosives.

the district boundaries set up by their Fulani overlords and confirmed by the British do not correspond to any real group boundaries. However, as we shall see, these districts have come to form the basis of the pagan Hausa indigenous political organization. The following lists of clans and the number of compounds belonging to each in the district of Jigawa, approximately 20 miles southwest of Kano city, and of Lakwaya are designed to illustrate these two situations.

District of Jí·gá·wá·: 17 households divided into clans as follows—Jí·gá·wá· 9; Tánkáfá·wá· 2; Yá·dámá·wá· 2; Yán Tág^{w}a·yé· 1; Dúwá·cá·wá· 1; Čányá·wá· 1; Túrbá·wá· 1.

District of Lak^{w}áya: 12 households divided into clans as follows—Yán Dáwdu· 3; Dámé·gá·wá 2; Yán Dámó· 1; *K*^{w}áryá·wá· 1; Yán Dá·*dí*· 1; Yán Gárdi· 1; Yán Túgu· 1; K^{w}í·dá·wá· 1; Yán G^{w}áwró· 1.

Before the Fulani conquest of 1807, the pagan political offices were of considerable importance. It is probable that the pagan headman had considerable power in the regulation of the pagans in his district and was responsible for the collection of the taxes to be forwarded to Kano city. The Fulani instituted a more direct rule under which taxes were collected and all but the most trivial disputes settled by a local representative of the Fulani fief-holder. This policy of the Fulani has led to the atrophy of pagan political organization, the forms of which, however, are still maintained. In this political organization the clan plays a decisive part in that every office is traditionally assigned to a particular clan. Where a clan is dominant in a district, a majority of the offices—including the most important ones—will be assigned to it. This will be clear from the following schedule of political titles in the district of Jigawa and the clans to which they are assigned.[3]

Title	*Clan*
Sárkín Nó·ma·	Jí·gá·wá·
Gala·dí·ma·	Jí·gá·wá·
Číro·ma·	Jí·gá·wá·
Sárkín Fá·da·	Jí·gá·wá·
Sárkín Yá·*ki*·	Dúwá·cá·wá·
Bárde·	Jí·gá·wá·

3 All of the titles listed here, except Sarkin Noma itself, should be completed by the phrase ná Sárkín Nó·ma·, "of the king of farming," and are subordinate to that office. In many pagan communities and in former times in Jigawa there was a Sarkin Arna, "king of the pagans," and Sarkin Dawa, "king of the bush," with a parallel series of subordinates.

Title	*Clan*
Mádáwákí·	Jí·gá·wá·
Wazí·ri·	Jí·gá·wá·
Sarkin Fu·*dá*·	Tánkáfá·wá·

When a problem of succession to office arises, the new incumbent is chosen from the appropriate clan by an assembly of all the compound heads of the district. There is a tendency for office to be inherited in the family line along with the headship of the compound, but there are frequent exceptions. The holder of office need not even be a compound head, though he invariably is for the more important positions. Native practice and native theory are clearly in accord in associating the political titles primarily with the clans.

The clan itself has no political organization. There are no occasions on which all the compound heads or all the members of a particular clan meet or act as a unit. Neither are there functional organizations with a kinship basis above the clan level. Regional groups of pagan Hausa are distinguished by tribal scarifications, these groups corresponding very roughly to the political states into which the Hausa-speaking territory is divided. Each clan is supposed to have such an affiliation. Thus certain clans call themselves Kácíná·wá·, "people of Katsina," and have distinctive marks; most of them are to be found within the territory of the Hausa state whose capital is the city of Katsina. The imperfect localization of the individual clans is reflected in a wide representation of Kácíná·wa· in surrounding territories. Most of the pagans of the Emiriate of Kano have distinctive tribal marks and call themselves Kútúmbá·wá·, a name applied in native historical records to the pre-Fulani ruling group of Kano. These Kutumbawa refer to the Moslem Hausa of Kano simply as Káná·wá·, "people of Kano." These tribal groupings underly the present division of the Hausa into separate political entities. They are of long standing but no longer play an independent political role.

Hausa clan names show two main types of linguistic formation. In the first, the clan as a whole is referred to by a phrase the first component of which is Yán, "children of," and the second component is a word in common use in the language. Thus Yán tág"a·yé· means "children of the twins" and yán dámó·, "children of the lizard." A single male member of this latter clan is referred to as dán dámó·, "son of the lizard," and a female member as yáʀ dámó·, "daughter of the lizard." The other type, used in Hausa for national and occupational names involves a prefix ba– in the singular and the suffixes e· in the masculine singular, –iya· in the feminine singular and –a·wa· in the plural. These forms all

have a constant tonal pattern. Examples of this mode of formation are bají·ge·, "a male member of the Jigawa clan"; bají·gíya·, "a female member of the Jigawa clan"; jí·gá·wá·, "members of the Jigawa clan"; bazá·fe·, "a male member of the Zafawa clan"; bazá·fíya·, "a female member of the Zafawa clan"; zá·fá·wá·, "members of the Zafawa clan." The only deviation from these two patterns of which I am aware is the clan name mazáwáya·, "defacators," following a common pattern of agent formation in Hausa with the prefix ma-. In the numerous names with the suffix -a·wa· in the plural, the root is usually susceptible of an interpretation on the basis of some word in the language. The fact that these derivatives have fixed tones sometimes offers several interpretations based on simplexes which differ only in tone. Sometimes the praise-verse (*kirá·ri·*) of the clan contains an obvious play on the word, leaving the native interpretation beyond doubt. The following list of clan names whose derivation either is certain or likely will show the range of meanings from which the clan names are drawn.

Clan Name	*Derivation*	*Meaning*
Ji·ga·wa·	jí·go·	pole, stake, used in sacrifice
Duwa·ca·wa·	dúwa·cú·	stones
Turba·wa·	túrba·	path
Či·ba·wa·	číbi·	umbilical cord
Kura·da·wa·	kúra·dá·	sickle
Cunta·wa·	cúntúwá·	windfall
Sar*ḱ*a·wa·	sár*ḱ*a·	chain
Buga·wa·	búga	to strike
Kiya·wa·	kíya·yé·	protect
Kimba·wa·	kímbá·	African pepper tree and fruit
Sa·no·na·wa·	ša·nó·no·	a particular shrub
Do·gara·wa·	do·gári·	buttress, pillar
Ma·ra·wa·	má·rá·	piece of calabash with smoothed edges
*K*ʷarya·wa·	*k*ʷárya·	calabash
Za·fa·wa·	zá·fí·	heat
Gangama·wa·	gangáma	to meet
Ma*d*awka·wa·	*d*áwka	to pick up
Tambara·wa·	támbarí·	a type of drum

Clan Name	*Derivation*	*Meaning*
Karfa'wa'	kárfí'	strength
Maraka'wa'	maráḱí'	calf
Te'ka'wa'	te'kú'	the sea
Za'buwa'wa'	za'búwá'	guinea-hen
Canya'wa'	cánya'	cricket
Go'za'wa'	go'zó'	coarse cotton thread
'Amarya'wa'	'ámáryá'	bride
Fara'wa'	fárí'	white
Duruma'wa'	dúrumí'	species of tree
Yan Tág^{w}a'yé'		children of the twins
Yan 'Áli		children of Ali
Yán Dámó'		children of the lizard
Yán Dáwdu'		children of farm work[4]
Yán Dá'*dí*'		children of sweetness, ease
Yán Gárdi		children of the snake-charmer
Yán G^{w}áwró'		children of the bachelor
Yán Túgu'		children of the trader in stolen property
Yán Zá'ki'		children of the lion
Yán Gádó'		children of the bedstead
Yán G^{w}á'ri'		children of the Gwari (a non-Hausa tribe of Nigeria)
Yán Dú'ce'		children of the rock
Yán Gábas		children of the east

There is no well-formulated native theory about the origin of these names. When questioned about them, a native will say that there must have been a man who was the progenitor of the clan and from whose name the clan name was derived. In one instance, a member of the Yan Dá'*di*', "children of ease, prosperity" affirmed unequivocally that the clan-name was derived from that of his fifth lineal ascendant who was clan-founder and bore the nickname Dá'*dí*' because of his affluence. The almost complete lack of agreement between pagan Hausa personal names and the words from which the clan names are derived

4 Dáwdu' was stated by informants to mean "farmwork." In G. P. Bargery, *A Hausa-English Dictionary and English-Hausa Vocabulary* (London 1934) it is described as an epithet applied to one holding the office of Galadima.

make it improbable that the names were derived from those of human founders. A slightly variant theory connects the clan name with the circumstances surrounding the birth of the clan ancestor. The Turbawa suggested that their ancestor had been born on a road, túrba·. My interpreter, a Moslem of Kano city, volunteered the suggestion that the Dúwá·cá·wá· were so called because their ancestor had been born on dúwa·cú·, "stones," a conjecture which received no support from the Dúwá·cá·wá· themselves. Since pagan Hausa names are often given in just this way, from the circumstance surrounding the act of birth, this is practically equivalent to the theory that the clan-names derived from the name of the clan-ancestor.

There is no likelihood that the names have any connection with the "totems" discussed below. In only two names Yán Dámó·, "children of the lizard," and Yan Zá·ki·, "children of the lion," is the name of a "totem" involved and in both cases the animal is not the "totem" of the clan to which it gives its name.

In addition to its name, every clan has a *ƙ*irá·ri·, "praise-verse."[5] This verse is recited on two occasions—the birth of a male child and the ceremonial washing of the bride and groom immediately before the leading of the bride to the house of the groom. The praise-verse is often obscure in meaning, containing words whose meaning could not be explained by native informants. The kirá·ri· often contains obvious play on the clan name. The following will serve as an example:

Yán Tág^{w}a·yé·, "children of the twins"

tág^{w}a·yán ga·wó· *d*áya da *ƙ*áya· *d*áya bá·bu, jínjirí· na· číki hánnúnsa wajé, do·mín zá·fín ro·*ƙ*ó·

"Twins of the acacia; one has a thorn, the other has not. The infant is inside, his hand outside because of the ardency of his begging."

All the clans have associated with them a number of taboos on eating or killing certain animals, on burning certain trees or eating their fruit. A few diverge from this common pattern, for example, a taboo against drinking gíya·, "millet beer." This group of taboos is always attributed to the clan and is often called kân gídá·, "head [*caput*, not *dux*] of the house." This is evidently an extended use of the phrase, since some informants insisted that it could only properly be applied to animals and that every clan had one such animal it respected, while the other taboos were of a different nature. However, most natives, when asked about their kân gídá· gave the whole set of prohibitions.

A review of the list of these taboos which follows will disclose much over-

5 The Hausa *ƙ*irá·ri· is analagous to the "praise-names" found so widely in African cultures. Among the Hausa almost every object of cultural interest is provided with one, e.g. plants, animals, ethnic groups, individuals, supernatural beings, and even diseases.

lapping. One such taboo, that against burning the pawpaw tree, is indeed almost universal and was stated by one informant to be characteristic of the pagan Hausa as a whole. This prohibition is not quite universal, since it was explicitly stated for several clans that they did burn the pawpaw. The belief is always held that violation of the taboos will lead to skin disorders or leprosy. In the case of animals, ill effects are supposed to follow not only from killing or eating the animal, but also from stepping on the spot where it has passed. On the other hand, the clans which have the bída· snake as their kân gídá· believe that if it passes a compound and is seen by one of its members, the compound will be increased in membership, either by the acquisition of a wife or the birth of a child.

The taboos are not observed by boys before circumcision. A woman observes those of her husband "out of respect," and abandons those of her own clan. On reaching menopause, or on leaving her husband's compound after divorce or after his death, she no longer observes the taboos.

In a few instances, there are generally known stories which account for the more usual taboos. Thus, the Čányá·wá· will not eat chicken because on one occasion when a visiting notable stayed at a Čányá·wá· compound, the headman ordered someone to bring a chicken for the guest. The man detailed to this task heard the chickens talking among themselves. When this was reported to the headman, he decreed that no man of the Čányá·wá· clan should eat chickens in the future "because they are like human beings." The Kíyá·wá·, whose taboo against drinking millet beer is a painful one for the pagan Hausa and which occasions much amusement among the other clans, say that once the Kutumba·wa·, "king of Kano city" (the story therefore purports to date from before the Fulani conquest of 1807), visited one of their compounds. The compound head was drunk from millet beer and acted discreditably before his distinguished visitor. Later, when sober, he established the rule that thereafter no member of the Kíyá·wá· clan might drink millet beer. The only instance of a story accounting for the respect of a kân gídá· animal is that of the Za·fá·wá who say that they refrain from eating the meat of the crane because at the birth of their clan ancestor a stork was perched on the roof of the hut.

The widespread taboo on the burning of pawpaw wood was attributed by several informants to its use in the construction of the miniature huts found in many pagan Hausa compounds, dedicated to one of the two sister spirits 'ínna and 'uwárdáwa·. One of those who gave this explanation, on another occasion attributed the sanctity of both pawpaw and acacia to gratefulness for their use in preparing antidotes for arrow poison.

Table of clans and their taboos[6]

Clan Name	*Taboos*
*K*arka·wa·	Burning pawpaw, eating the ta·cúnya· shrub
Dame·ga·wa·	Burning pawpaw in the bush
Yán Dá·*dí*·	Burning pawpaw or ebony, eating pawpaw fruit
Yán Dáwdu·	Burning pawpaw or ebony
*K*ʷarya·wa·	Burning pawpaw or eating its fruit
Yán Gárdi·	Burning pawpaw and ebony
Kʷi·da·wa·	Burning pawpaw
Turba·wa·	Burning pawpaw or eating its fruit, burning sansa·mí· wood, bída· snake (k.g.)
Čanya·wa·	Burning pawpaw, eating chicken, kʷá·kiyá· snake (k.g.)
Tankafa·wa·	Burning pawpaw or eating its fruit, bída· snake (k.g.)
Kiya·wa·	Burning pawpaw or eating its fruit, burning wood of the shea butter tree, drinking millet beer, elephant (k.g.), touching ivory
Tambara·wa	Burning pawpaw, elephant (k.g.)
Kimba·wa·	Burning pawpaw or acacia
Ma*d*awka·wa·	Burning pawpaw or acacia, eating pawpaw fruit
Za·fa·wa·	Burning pawpaw, crane (k.g.)
Raraka·wa·	Leopard (k.g.)
Karaba·wa·	Lizard (k.g.)
Ga*b*ara· wa·	Leopard (k.g.)
Ji·ga·wa·	Burning pawpaw or acacia, bída· snake (k.g.)
Yan Gʷá·ri·	Burning pawpaw, snake (k.g.)
*K*i·gida·wa·	Eating fruit of the dányá· tree, leopard (k.g.)
Duwa·ca·wa·	Burning pawpaw or gáw*d*e· shrub, bida· snake (k.g.)
Ya·dama·wa·	Burning pawpaw or da·ší wood, tándára· snake (k.g.)
Máza·wayá·	Burning pawpaw, lion (k.g.)
Buga·wa·	Burning pawpaw or eating is fruit, leopard (k.g.)
Go·za·wa·	Bída· snake (k.g.)
Yan Gado·	Bída· snake (k.g.)
Yan Za·ki·	Burning pawpaw, bída· snake (k.g.)
Da*r*naka·wa·	Burning pawpaw, bída· snake (k.g.)

6 The notation of k.g. after an animal species indicates that it was stated to be the kân gídá of the clan.

The Hausa, both pagan and Moslem, distinguish between relationship on the father's side (ná wandó·, "of the trouser") and on the mother's side (ná zánę·, "of the woman's cloth"). As we have seen, when questioned concerning the origin of the clan name, the most usual reply is that there must have been a clan ancestor in the male line who gave his name to the clan at its founding. However unlikely as an actual theory of the origin of the clan designations, we have here a srong native affirmation of the common origin in the patrilineal line of all the members of a particular clan.

The exogamous rule is satisfied by marriage with a member of any other clan. No attention is paid in this matter to the tribal groupings to which the clan belongs, and the marriage takes place occasionally between couples who live at a great distance from each other. The exogamous rule is said to be ignored by the clan of the Yán Má·yú·, "children of the witches," who, because of the unsavory nature of their occupation (which is supposed to be inherited with the mother's milk), are reduced to endogamy.

Although any marriage into another clan is possible, the cross-cousin marriage between a man and his mother's brother's daughter has a definite preferred status. This is expressed by saying that a man should take a wife from the same place his father did.

The emphasis on cross-cousin marriage has its correlate in the joking relationship between cross-cousins. Although the kinship terminology,[7] which is in general of the merging type, gives no special recognition to cross-cousins as opposed to parallel cousins, cross cousins, whether of the same or opposite sex, are said to be 'abó·kán wa·sá·, "playmates." This is a relationship also found between grandparents and grandchildren and in some other instances to be discussed later. Among the liberties allowed between 'abó·kán wa·sá· who are cross-cousins is the taking of property without compensation. It is the privilege of the offspring of the sister to take property from the offspring of the brother, who are supposed to be too proud to retaliate because of their superior position. Traditionally, the time when this should occur is during the month of Muharram, the first of the Mohammedan year, the 10th day of which is an important festival in all Moslem countries. Coincident with this festival, the inferior cross-cousin may take nine cowrie shells from his superior relative.

This usage is extended to pairs of clans between whom there is traditional intermarriage. All clans have at least one partner in such a relationship, occasion-

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7 For Hausa kinship terminology see J. H. Greenberg, *The Influence of Islam on a Sudanese Religion* (Monographs, American Ethnological Society, no. 10, 1946), p. 20.

ally several, and a pair of clans thus connected are said to be 'abó·kán wa·sá· to each other. Of the two clans, one is said to be *d*an wâ·, "son of the older brother," and the other one *dán kánwa·*, "son of the younger sister"; and any member of the latter clan, as the inferior, is privileged to take from any member of the former. However, both clans as a rule claim to be superior and refuse to take from each other. In another formulation, the members of the superior clan claim that their joking partners are descended from one of their slaves in former times who married the daughter of their clan ancestor. Here again each clan claims that the other is descended from one of their slaves. One clan at least, the *K*^{w}áryá·wá·, state that they are descendants of a Baribari (Kanuri) slave, the great-great-grandfather of the present mature generation, who married a daughter of a member of the Zá·fá·wá· clan whom the *K*^{w}áryá·wá· consider their superior cross-cousins.

In view of the widespread nature of slavery in former times, it is not improbable that new clans often arose in this manner. However, the mechanism of slave incorporation into pagan Hausa society employed just prior to the British occupation in the district of Jigawa, the one most intensively studied, would not lead to such results. The male slave was adopted by the compound head as a son, and he was thereafter reckoned as a member of the clan of his master. A wife was then obtained for him from another clan, his owner paying the bride-price. After his master's death he might establish a compound of his own and this household would, of course, be reckoned among those of his former master's clan.

Clans between which the play relationship is found usually live at a fairly great distance from each other at the present time, but it is invariably stated that they formerly lived in close proximity to each other. In spite of the special relationship existing between such pairs of clans, there is no marked tendency for intermarriage to be appreciably more frequent than between other clans.

The other joking relationships between individuals are between grandparents and grandchildren, between parents and their youngest child (who in this as in other respects is assimilated to a grandchild), between a man and his older sibling's spouse and a woman and her older sibling's spouse. Grandparents and grandchildren of opposite sex call each other "husband" and "wife" in play, and this is also true of brothers-in-law and sisters-in-law who are joking relatives. The latter are all potential mates by the junior levirate or junior sororate, institutions which exist among the Kare-Kare and other tribes of Northern Nigeria linguistically related to the Hausa and with similar kinship terminologies and patterns

of joking and respect relationships.[8] The recent presence of this type of marriage is attested by several older informants. Indeed, the levirate at least is found among the Moslem Hausa and its disappearance among the pagans studied may be a local phenomenon. One informant, in emulation of W. H. R. Rivers, deduced the former existence of the levirate and sororate from the custom just mentioned of the use of the terms "husband" and "wife" by those who were potential partners in such marriages.

A man may not be simultaneously married to two women of the same clan, which excludes, *a fortiori,* sororal polygyny. If a wife dies, her husband may marry another girl of the same clan, but it should not be her younger sister. It is more frequent for someone else in the widower's compound to restore the lost clan ties by marrying into the clan of his kinsman's deceased wife. There is no objection to several brothers or other male members of the nuclear group marrying women from the same clan and this, in fact, is a fairly frequent occurrence.

The clan plays almost no part in the specifically religious life of the pagan Hausa. Activity is either individual, as in the possession cults, or based on the household, as in the annual sacrifices at sowing and harvest time. The compound head performs the sacrifices in behalf of the entire household. The precise schedule of animals to be offered is inherited from the previous compound head. Since the members of the same clan are, in fact, usually closely related and initiated outsiders such as slaves (in former times) are instructed in the rituals by the master who adopts them, all the households of the same clan carry out sacrifices closely resembling each other. The sacrifices to certain spirits being practically universal among the pagan Hausa, there is much overlapping, not only among households of the same clan but even among those of different clans. On the other hand, certain spirits may be exclusively, or almost exclusively, identified with a single clan. Such a spirit is often called the kân gídá· of the clan, a term which, as we have seen, is generally applied to the "totem animal." There is one occasion on which this is given formal recognition. On the Sunday after a marriage ceremony has been performed each household sends the appropriate sacrificial animal of its kân gídá· spirit to the other household to be sacrificed. The spirit identified with the clan on this occasion need not be one which is cultivated exclusively by the clan—there will often not be such a spirit—but where the worship of a particular spirit is confined to a single clan, this spirit seems to be its

8 These peoples include the Bolewa, Ngizim, Kare-kare, Ngamo, and Kanakuru, all of whom are treated in C. K. Meek, *Tribal Studies in Northern Nigeria* (2 vols., London, 1931), vol. 2.

kân gídá· spirit invariably. This practice was discovered too late in the present investigation for more than the following identifications to be recorded:

Clan	*Spirit*
Ji·ga·wa·	Máḱé·rá·, "Anvil"
Ya·dama·wa·	Ba·musayí
Turba·wa·	Yár Dó·rína·, "Daughter of the Hippopotamus"
Kiya·wa·	Kú·re·, "Hyena"

From the foregoing account, the important place which clan organization occupies in the pagan Hausa culture will be evident. It stands out alongside the specifically religious practices as the most distinctively non-Moslem aspect of the pagan culture, and exhibits, in contrast with the religious practices, hardly a trace of Moslem influence.

THE EFFECTS OF CONVERSION ON THE CLAN SYSTEM

The outward evidence of the conversion of the pagan is his appearance before the Moslem district head's local representative or a provincial Moslem judge by whom, after ceremonial ablution, he is presented with a gown, turban, and a jug (*bú·ta·*) used to hold the water used in the ablution which precedes Moslem ritual prayer. With this, however, the pagan does not immediately conform to all the practices of his fellow-Moslems. The motives which lead to conversion include, in the pre-European period, the desire to escape the extra poll-tax levied on non-Moslems, the greater social prestige of the Moslem community with its political power, its distant trade connections and its membership in a vast community of world-wide proportions, anxiety to escape the imputation of rusticism connected with paganism because its area of survival is entirely rural. Among these motives, that based on an actual acquaintanceship with Islam as a religious system and a conviction of its superiority to paganism is of relatively minor importance. The new convert calls himself a Moslem but possesses only a superficial acquaintance with the system he has adopted. The inquiries addressed to the Malams, the learned class, only sparsely represented in the country and possessing often only a minimal knowledge of Islam, the observed practice of these Malams and, above all, the practice of the rural uneducated Moslems beside whom the convert lives, brings about a gradual assimilation to the requirements of Islam as understood by the rural Moslem Hausa. The process is protracted over several generations and is sporadic, differing in different areas and even among different families. The presence or absence of Malams in particular

families of the converted is an important differential factor in determining the speed and thoroughness of assimilation.

Material from such half-assimilated recent converts will be utilized here insofar as it illuminates the course of events which leads to the extinction of clan structures among the fully assimilated. The situation is, of course, not fully comparable to that of the early mass conversions which set the pattern of suppression of clan organization, a pattern now fully established, to which the converts from the present minority of pagans gradually conform.

Among those groups whose conversion took place two or three generations ago the clan still survives. In answer to the question 'iná· 'í·rinka ? "What is your kind?" to which the pagan Hausa answers with either his tribal name, e.g. Kutumbawa or Katsinawa or his clan name, these converts also answer with either a tribal name or their clan name. The *kirá·ri·* verse, though no longer employed at births or marriages, is known to some individuals. Though the clan name is known, the clan itself is divested of practically all its functions, as will be evident from the material to be presented.

One of the most striking differences between the clans of the recent converts and of the pagan Hausa is that the former are no longer exogamous; marriage within the clan is allowed, though not required. The pagan cross-cousin marriage is replaced by the favored Moslem form of parallel-cousin marriage between the children of two brothers. The loss of clan exogamy is everywhere found immediately after conversion and is one of its first effects. A pagan explaining what would be involved in his conversion said that he would now consider his parallel cousins as 'abó·kán wa·sá·, "joking relatives," and marry his former clan mates. Although the association between joking relationship and marriage is only found in the case of cross-cousins of opposite sex, it will be seen that the association is so strong that once parallel cousins begin to marry, they are said to be in a joking relationship. This is only a passing phase, since among the Moslem Hausa as a whole, cross-cousins are considered joking relatives, a survival of pagan conditions, while parallel cousins are not, in spite of the preferred status accorded to this type of marriage.

The pagans, upon conversion then, begin to practise a marriage which was formerly considered incestuous. As far as one can see this transition takes place smoothly and without conflict. It may be remarked, that pagans when stating the rule of clan exogamy did so in a matter-of-fact way. It will be recalled that the supposed clan of witches is said to be endogamous, so that the pattern of clan endogamy is not entirely foreign to the pagan Hausa. I can only record

that I did not attempt to elicit an emotional reaction to this ostensible incest situation and none was spontaneously offered to me when the subject was under discussion.

The change in marriage preference type is all the more remarkable since Islamic law neither forbids cross-cousin marriage nor requires that between parallel cousins. Parallel cousin marriage is an institution of pre-Islamic Arabia closely associated with the very tribal exclusiveness which Mohammed sought to supercede with the wider ties of Islamic brotherhood. It has moved everywhere with the Arabs and, in spite of its lack of legal status, in many areas its adoption is an indication of adherence to Islam. The Moslem jurists have formulated their principles in accordance with the Koranic passages concerning incest in which cousins are never mentioned among the forbidden degrees. Thus, according to Moslem law, cross-cousin and parallel-cousin marriages are equally permissible.

One of the results of conversion is the almost immediate lapse of the political functions of the clans. The small degree of autonomy remaining under the native pagan offices is entirely sacrificed to direct rule by the local representative of the Fulani district head. It is true that the patterns of "king" (Hausa, sárkí·), with subordinate affiliated titles modelled after that of the Emir himself and his court, is found among the Moslem Hausa, but only for certain occupations organized into guilds. Thus there will be, in rural centers as well as in the capital, a Sárkín Máké·rá·, "King of the blacksmiths," with his subordinates and a Sárkín Fá·wá·, "king of butchering," etc. However the titles Sárkín Nó·ma·, "king of farming," Sárkín 'Árna·, "king of the pagans," and Sárkín Dáwá·, "king of the bush," and their subordinate titles, are all distinctively pagan and disappear on conversion, even as titles. A further factor is that during their present obsolecence among the pagan Hausa themselves the titles have become, in the words of the pagans themselves, tá gíya·, "of millet beer," and are awarded to the men who can most adequately fulfill the requirements of the periodic drinking bouts at which the pagan Hausa compound heads congregate. The connection of these political offices with the drinking of intoxicating liquors forbidden by Moslem law has contributed to their disappearance upon conversion.

One of the first things the new convert learns is the provision of Moslem law by which the husband is responsible for the support of his wife. He learns, but usually not as soon, that the Malams disapprove of women doing farm work. Thus, in some instances, there is a transitional period in which the woman is in the favorable position of being provided with food and clothing by her husband

and at the same time retaining her source of income, the profits of which now accrue to her entirely. One informant related how in his recently converted group, women had done farm work up to two years before, but they had made them discontinue "because they saw that it was too difficult for them" a point of view obviously acquired from noting the attitude of the learned Mohammedans towards women's farm work. The rationalization allowed them to conform to Moslem practice without seeming to acquiesce to the demands of the Malams.

The refusal to allow women to do farm work, with all its consequences for the organization of the extended family, though an obvious correlate of the obligation of the husband to support his wife completely, is not specifically required in Moslem law. The wife may work if she wishes, but she cannot be compelled to. The cessation of farm work by women is a step in the direction of the seclusion of women in the harem characteristic of Moslem urban culture. It is the imitation of the urban group with its prestige that motivates the Malams in their attempt to suppress practices not explicitly forbidden by Moslem law. In actual fact, the complete seclusion of women is never carried out in the countryside with its lower level of economy, since the woman must carry water from wells and do a certain amount of market purchasing. Even in the city, many men are too poor to completely dispense with their wives' economic services. A man's rise to affluence is marked by the introduction of harem practices in his household.

When the woman discontinues farm work, she is, of course, no longer assigned her gayáwna· or gayángayán plot from the communal land. The subordinate males, deprived of the female labor that would support them most of the year, are compelled to work an equivalent extra amount of land. As a result, they are no longer capable of devoting as much time as formerly to work on the communal gandú· under the direction of the compound head. The gandú· is further weakened by the absence of the former female contribution. The result of this trend is the reduction of the gandú· to the mere private plot of the compound head. Here another provision of Moslem law intervenes. At a man's death his property must be divided. The pagan arrangement by which the compound head administers an undivided gandú· for his younger brothers is thus set aside and the ancestral property equally divided. The arrangement which emerges from this set of influences is that where a number of brothers live in the same compound, each has a plot called a gandú·, not comparable in size or function to the pagan gandú·. The only survival of the old system of temporary alienation is the assignment of a gayáwna· from his father's gandú· to each mar-

ried son of a gandú· owner. The sons on their father's death succeed to his gandú· which is then further divided. Under this arrangement the old unity of the household based on the communal ownership and working of the gandú· is lost. Brothers are economically independent of each other even when they live in the same compound. Relatives more remote than first cousins never live in the same compound and the tendency is for the individual families of father, wives, and children to form separate compounds so that the economic gandú· unit coincides with the compound as a residence unit. The smaller size of compounds among Moslems and their lesser productivity as a consequence of the loss of the woman's economic contribution is noticeable.

The extended family is further weakened among the recent converts and the Moslems by the loss of its religious functions. As the most conspicuous pagan Hausa religious activity, the sacrifices to the spirits performed by the compound head in behalf of the entire compound are abolished with conversion.

The religious bond among the pagans unites not only members of the same compound but also those of related compounds. When a new compound is founded, a sprig of the da·ší· wood, found in every pagan compound, is taken from the old household, and the schedule of sacrifices of the parent house is continued in the new one.

Of all the institutions and functions associated with clan, only one escapes the general debacle. The taboos are maintained among converts even after knowledge of clan affiliation is lost and survive on into the general Moslem population. They are viewed, one might almost say, in medical terms as hereditary allergies transmitted in the patrilineal line, all knowledge of their connection with the now non-existent clans being lost. The prevalence among the general Moslem population of inherited taboos, such as that against killing the bída· and burning pawpaw wood, is an evidence of the universality of clan institutions among the Hausa prior to conversion.

The economic and religious factors just outlined result in the disappearance of the extended family as a functional unit among recently converted pagans and among Moslems. The general weakening of kinship ties beyond those of the immediate family deprives the clan of its basic support. A man who has no economic or religious ties with even close collateral relatives is not likely to maintain the more distant ties of clan kinship.

In this treatment I have avoided the search for a single cause of the phenomenon of the disappearance of clans among the Hausa.

There have been two main types of occurrence which have made their con-

tributions. There is the loss of all the important functions of the clan—social, political, and religious—and there is weakening of kinship ties in general through the breakup of the extended family which constitutes the basic support of the clan system. Clans may continue a shadow existence among newly converted groups, but they are, in fact, nothing but names indicating a former affiliation no longer requiring any actual rights or obligations. Once the father neglects to tell his son the now unimportant fact that he belongs to such and such a clan, or refuses to tell him in order to obliterate his pagan past, the clan has ceased to exist even in name.

Finally, over and above the specific factors responsible for the disappearance of the clan, its very success among the pagans in withstanding the Moslem penetration and borrowing, so evident throughout the pagan culture, made it a target upon conversion. Such other aspects of the pagan culture as the circumcision and marriage ceremonies which had become inextricable complexes of pagan and Moslem elements had, as it were, obtained immunity through this process, and were better fitted to survive the transition.

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REVIEW OF SOVIET ARCHAEOLOGY, 1919-1945, IN HISTORIC PERSPECTIVE[1]

HENRY FIELD AND KATHLEEN PRICE

INTRODUCTION

THE DATE April 18, 1919 will always remain significant in the development of Soviet historical science, for on that day Lenin signed a Decree for the foundation of the new Archaeological Commission—the State Academy of the History of Material Culture (GAIMK), reorganized later as the Institute for the History of Material Culture (IIMK).

GAIMK was designed to improve upon all that was lacking in the old Archaeological Commission, but at the same time it was to make use of all previous data. Therefore, when recording the achievements of IIMK during the past twenty-five years, all Russian and Soviet discoveries must be considered, from the time when the Archaeological Commission was established, February 14, 1859.

The first archaeological investigations, based on a literary survey, were of a character purely intended for the Court. The Court required primarily that work should be done for the Palace of Arms, which thanks to the Boyar[2] Hitrov during the middle of the seventeenth century, had been transformed into the first important scientific museum in Russia. During the eighteenth and nineteenth centuries the Imperial Hermitage became the Court museum of treasures and a repository for archaeological collections.

Furthermore, Peter I organized a series of archaeological investigations and also issued a Decree[3] ordering the preservation of objects excavated and all

1 This summary by S. V. Kiselev was published in 1945 by the Institute for the History of Material Culture (IIMK). A copy was presented to H. Field by the author in Moscow on July 16, 1945, while a guest at the Jubilee Session of the Academy of Sciences of the U.S.S.R. in celebration of the 220th anniversary of its founding by ukase of Peter the Great. Mrs Price translated the text. Considerable editorial license has been used in order to conform to the previously published articles in collaboration with Eugene V. Prostov. See also *Anthropology in the Soviet Union, 1945* (American Anthropologist, vol. 48, pp. 375-396, 1946: *nb.* footnote 57); *Recent Archaeological Investigations in the Soviet Union* (American Review of the Soviet Union, vol. 7, pp. 67-74, 1946); and B. A. Kuftin, *Prehistoric Culture Sequence in Transcaucasia* (Southwestern Journal of Anthropology, vol. 2, pp. 340-360, 1946).

2 A boyar was a member of the aristocratic order next below that of the ruling princes. This group was abolished by Peter the Great.

3 See Henry Field, *Anthropology in the Soviet Union, 1945*, p. 385.

historical monuments, especially cathedrals. This tradition was continued by collecting enterprises[4] during the eighteenth century. Later, two directions became clear: one devoted to enriching the Hermitage bore the old Court character; the other included the beginning of scientific excavation. At the beginning of the nineteenth century Z. D. Hodakovskii was the first to interest himself in the preservation of the tumuli and ancient cities of Eastern Europe. For the purpose of registering, studying, and classifying them he traveled by carriage or on foot throughout a large part of European Russia. Through his reports, the attention of scholars was first drawn to the importance of these historical monuments, although they were not resplendent with gold nor artistic in design. At this same time G. I. Spasski was the first to arouse[5] interest in the archaeology of Siberia. During 1834 was published the work of the first numismatist, A. D. Chertov.[6] Chertov was also the first archaeologist to excavate scientifically the Slavic barrows near Moscow. The publications[7] of A. N. Olenin were scholarly.

Far from the collectors at the Court were P. Dultuks and I. A. Stempkovski, who worked at Kerch in the Crimea entirely with their private funds. To their lot fell the great discovery in 1830 of the rich Scythian tumulus at Kul-Oba near Kerch. The artistic and material value of this discovery was so obvious, that the Government began to provide large sums for the excavation of tumuli in this area.

Thus, the excavation of Greek cities north of the Black Sea continued. During 1854 appeared the first official Russian archaeological publication.[8]

A reflection of public interest can be seen in the founding during 1839 at Odessa of the Historical and Antiquarian Society, of the Russian Archaeological Society at St Petersburg in 1846, and in 1864 of the Moscow Archaeological Society. Later, were united other organizations, such as the Society of History, Archaeology and Ethnography at the University of Kazan, founded in 1878.

The climax of this scientific movement was the establishment of an Archaeological Commission, to which was entrusted the organization of excavations, the evaluation of antiquities discovered, and the collection of data concerning ancient monuments.

Excavations on Government lands could only be conducted with the approval of the Archaeological Commission. Furthermore, archaeologists were obliged to

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4 These include expeditions and research by scholars, especially by V. N. Tatischev.
5 Through his articles in the *Siberian Herald*.
6 *Description of Ancient Russian Money*, 1834: in Russian.
7 Among them *The Ancient Russian State*, published in 1849-1853: in Russian.
8 *Ancient Cimmerians of the Bosphorus:* in Russian.

offer to this Commission their finds and their observations. From these reports and from other documentary evidence, based on a century of research, were compiled the most valuable archives and photographs now in IIMK.

The Archaelogocal Commission became the most important center of archaeological research. A significant part of its activity was in the publication of Annual Reports and later of *Materials of Russian Archaeology* and *News of the Archaeological Commission.* These series, together with *Works of Archaeological Travelers* and the publications of the archaeological societies, contributed almost entirely to the archaeology of Russia.

Nevertheless, the activity of the Commission, even at the beginning of the twentieth century, had to serve the interest of the Court. All the resources of the Commission were directed toward the excavation of the Greek cities and tumuli of southern Russia to provide exhibition material for the Hermitage. In this sphere the Commission achieved significant results, especially when the expeditions were led by such scholars as I. E. Zabelin, whose name is connected with the very beginning of the work of the Commission and continued during sixty years. Zabelin discovered and investigated the best of the Greek tumuli, "The Great Bliznitz," with the rich tomb of the priest of Demetrius. He studied the complicated tombs of the huge Scythian tumulus, known as "Chertomlik." In one of these tombs he found the famous silver amphora with Scythian representations of stylized horses.

The excavations of N. I. Veselovskii, an archaeologist of the Commission, also had great scientific importance. At the end of the nineteenth and at the beginning of the twentieth century Veselovskii excavated the majority of the important Scythian barrows, thereby throwing light on the Scytho-Sarmatian culture. Some of his finds were unique. For example, the famous golden comb from Soloh *Gorodishche* with a representation of a horseman with two Scythians on foot falling upon him.

The excavation of these Greek cities, conducted by members of the Commission,[9] opened entire sections of the ancient cities of Panticapaea and Chersonesus. However, some of these excavations were carried out by insufficiently trained personnel. This was changed when B. V. Farmakovskii excavated Olbia (Olvia). His excavation by numbered squares has since become the standard method. Farmakovskii published a monograph on the objects found, and also clarified the historical development of southern Russia during the archaic period. In this field the achievements of M. I. Rostovtsev, a member of the Commission,

9 Cf. publications, especially the summary by V. V. Latishev.

were especially significant. At first Rostovtsev occupied himself with a series of individual investigations and then produced his monograph on the wall-paintings of the ancient Greek tombs of the Crimea and the Taman Peninsula. Rostovtsev's *Scythia and the Bosphorus* was the result of a study correlating the history of these Greek cities and the Scytho-Sarmatian cultures.

An important discovery was made by an expedition from the Archaeological Commission under the leadership of N. IA. Marr which worked chiefly at the medieval capital of Armenia. IA. I. Smirnov published a study describing the richness of the eastern inheritance from the east Caucasian, Central Asiatic, Armenian, and Sasanian cultures.

The Archaeological Commission concentrated on the study of Slavic tumuli[10] and, in a very limited degree, to the investigation of ancient cities. Spitsyn also wrote *Ancient Russian Tribes based on Archaeological Data,* in which he pointed out that there existed a possibility of connecting the art with the geographical distribution of the tribes.

In addition, N. P. Kondakov was the first to study a significant number of jewels of the pre-Mongol period and gave them an historical and cultural appraisal.

We must also record the restoration of ancient buildings, especially churches, and also mosques and *madressahs* in Central Asia.

The Archaeological Commission did much less in the sphere of Prehistory. Little interest was shown in the Paleolithic period. Bronze and Iron Age objects resulted solely from chance.

Central Asia, most of Siberia, and the Far East remained almost unstudied by archaeologists. Some data were obtained as a direct result of the initiative of local investigators, such as A. V. Andrianov and I. A. Savenkov in Siberia, and B. L. Viatkin and Pantusov in Central Asia.

POST-REVOLUTION

There soon appeared a swift growth of interest in the study of history and prehistory. Scientific institutes were organized, the most important being the State Academy of the History of Material Culture (GAIMK).

The position of archaeological education was changed completely, and at last specialized archaeological knowledge was converted into a systematic university course. Archaeology soon ceased to be the province of the amateur. GAIMK encouraged theoretical discussions and made possible the foundations

10 Cf. publications by A. A. Spitsyn, especially on data and objects found by A. S. Uvarov in the Vladmir tumuli.

of Soviet archaeology. In recent years, in collaboration with ethnologists, physical anthropologists, historians, and linguists, many theories regarding the origins and interrelationships of many groups have been developed. Palaeontology, geology, soil science, and other disciplines were also used in coöperation with archaeology.

The analysis of many ethnogenetic problems revealed the need of assistance from a new science of languages, created by Academician Marr, who, until his death in 1935, was the Chairman of GAIMK.

In recent years a reassuring change is noticeable in the wide range of publications.[11] All these and other published works resulted in the coöperative work entitled *History of the U.S.S.R.*, published in 1938 by IIMK. Furthermore, since then significant discoveries have been made; only the most important will be mentioned here.

Stations in the western Caucasus throw light upon the first phases of the Chellean and the Acheulian periods. Particularly successful appears the quest for Mousterian sites, contemporary with the climax of the Ice Age. Prior to the Revolution, Wolf's Grotto near Simferopol was the only Mousterian site studied. The discovery of a Mousterian site at Derkhul on the central Desna and also the discovery of Mousterian implements at Ostrovski near Chusovaia proved conclusively the existence of Mousterian settlements in all the European regions of the U.S.S.R. even in areas not immediately adjoining the glaciated zones. In addition, the first Mousterian station in Central Asia was discovered in the rock-shelter of Teshik-Tash in Uzbekistan. Here a Neanderthaloid child was excavated by A. P. Okladnikov. The artist-anthropologist, M. M. Gerasimov, has made a life-size reconstruction of this boy.[12]

Aurignacian, Solutrian, and Magdalenian sites were known in pre-Revolutionary times, but the number of new stations has greatly increased, thereby showing a wide diffusion. Paleolithic stations were studied in the Urals and in western, southern, and in eastern Siberia. At Timonovskaia near Bryansk, Gagarino and Kostenki on the Don, and at Malta near Irkutsk were discovered earthern-dwellings proving the settled state of the Aurignacian-Solutrian, and even of the Magdalenian, hunters. Investigations at Gagarino, Kostenski, and

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11 For example, *Soviet Archaeology, Brief Reports of IIMK, Materials and Investigations by Soviet Archaeologists, Reports and News of GAIMK, Historical Problems of Pre-Capitalist Society, Herald of Ancient History, Works of the National Historical Museum,* and publications by the Georgian, White Russian, and Ukrainian Academies of Science.

12 See Henry Field, *Illustrations of the Teshik-Tash Skull* (American Journal of Physical Anthropology, vol. 4, pp. 121-123, 1946).

Malta disproved the opinion of a number of Western scholars about the supposed backwardness of the eastern Paleolithic peoples. Here were found female figurines, carved from mammoth ivory, showing that the eastern Paleolithic peoples were masters of the highest form of Paleolithic realism.

Our knowledge has increased significantly in connection with the later stations. Sviderskian and Tardenoisian stations were discovered together with monuments of the type of Azilian kitchen-middens, and in the south, chiefly in the Crimea, were found a series of caves similar in culture to the late Capsian. This indicates ancient cultural links with the Mediterranean.

On the basis of standard methods, including paleobotany, the chronology of the Neolithic stations of the forest zones of Eastern Europe has been determined. Thus, the way of life of the Neolithic inhabitants was seen to have been a survival, going back to the third or even to the second millennium, when in the south the Bronze Age already held sway.

Such a clarification of the disproportional development of the different regions of Europe and Central Asia has made possible a concrete and not a schematic picture of their ancient history.

In addition, a number of investigations have been made in various regions of Europe and parts of the U.S.S.R., especially in Siberia, which have made it possible to isolate regional cultures. Within these limits we now speak with absolute precision of the "Volga-Oxus culture," the "Karelian," the "White Sea," the "Kargo-Polish," the "Trans-Kama," and a number of others.

A. P. Okladnikov has established the basis of the stages of development of the Neolithic Siberian *taigas* in the Angara-Yenisei and Lena-Baikal basins.

Concerning the Neolithic forest zone, attention is called to the discoveries (the first in the U.S.S.R.) of comparatively late links with the end of the second and the beginning of the first millennium before our era. On the Modlon River in the Vologodskii district and in the Gorbunovo turf-pits in the Urals, this type of station was found.

Recent researches by V. I. Ravdonikas, A. IA. Briusov, and A. L. Linevskii in the White Sea and Lake Onega regions confirm completely the existence of later Neolithic phases in the north.

In conclusion, must be mentioned the discovery in recent years of a number of Neolithic tombs. Among these, for especial richness of materials, stand out Mariupolskii at Preazov, Olenostrovskii near Lake Onega, and the Neolithic tombs beside the Angara River and in Trans-Baikalia.

The study of primitive agriculture has given exceptionally significant results,

as for example during the so-called Tripolje culture, the period when the Ukrainians first became acquainted with the use of bronze. The IIMK expeditions, led by T. S. Passek, succeeded in reconstructing in great detail the architecture and mode of life of the inhabitants of Tripolje during the fourth-third millennia BC. The Tripolje "squares," about which many contradictory statements had been written at the beginning of our century, were finally decided to be ruins of clay huts. These long dwellings consisted of rows of rooms, in each of which lived a family, having a separate stove for baking bread and their sacrificial hearth. The plan of these houses is reminiscent of the "long houses" of the North American Indians, whose chief occupation was agriculture, and have preserved in complete inviolability the customs of matriachal law.

The exceptional importance of agriculture during the Tripolje phase is proved by the excavation of houses where a number of grains of cereals, hoes, stone sickles and winnows were found. The presence of many female figurines allows one to assume the preservation of the tradition of tribal matriarchy.

Painted pottery from this site is also of especial interest. The fate of the Tripolje culture was revealed recently as a result of the excavations at Usatov near Odessa, where foundations of houses were unearthed. Only the round stone facings are preserved, light in construction, obviously remains of huts. Among the finds were a number of bones of domestic animals, but no traces of agriculture were discovered. The Tripolje hoe-type of agriculture must have yielded to cattle-raising, obviously demanding frequent changes of grazing grounds. The result was that the building of the Tripolje type of clay house became superfluous. Similar finds occurred in the tumuli at Usatov. The large kurgan contained a male skeleton and two women, evidently buried by force. Such ritual is incompatible with the customs of matriarchy and points to the beginning of patriarchy. It supports the growth of cattle-culture, thus strengthening the importance of the masculine shepherd.

Bronze Age monuments of the Black Sea steppe zone were studied systematically at the beginning of our century, when V. A. Gorodtsov described the following: "burials in fosses," "catacomb burials," and "log-cabin burials." Later excavations in the Ukraine, in the Don Basin, and along the Volga have confirmed the basic position of this classification. A cultural change is also traceable in the above-mentioned three types of burial. These correspond with the three successive modes of economy: the hunting-fishing, the pastoral with the rudiments of agriculture, and the preëminently agricultural. Gorodtsov established a series of regional variations—between the monuments of the Volga and

the Don, between those of the northern Crimea, those of the Don Basin and the Kuban, and finally the difference between the Kuban monuments and those of the Don and Volga regions.

Excavations of Bronze Age sites have played a great rôle in these investigations. They yielded especially valuable material for the Srubnaia ("log-cabin") culture, placing it at the end of the Bronze Age, the second half of the second millennium BC. Their settlements are strongly reminiscent of those of Tripolje in their size and population, by their long houses (now half-catacomb and half-wood work), and by the great rôle of agriculture in their economy.

Here the patriarchal relationship already holds sway and begins to play a significant part in primitive family life and in other aspects of tribal organization. The Fatianovo tombs of the region between the Volga and Oxus rivers revealed bones of domestic animals, thus indicating the existence of cattle-raising settlements in the forest zone of Eastern Europe during the Bronze Age.

The first successful investigation of Bronze Age monuments was in the Oxus-Kama region and along the Volga, where there was a separate series of stations, kurgans, and tombs, with original local features and in form showing influence from the south, from the Srubnaia cultural region, and akin also to the Andronovo culture of Siberia. This was evidently an agricultural civilization of the second millennium, called by local archaeologists "Abashevskaia." Remains of this type were found in Trans-Uralia and near Ufa.

Important Late Bronze Age monuments were discovered in the turf-pits of the Urals. Especially valuable were the finds at the Gorbunovo turf-pit in the Lower Tagil district of the Sverdlovsk region. There, on the banks of the overgrown Lake Gorbunovo, primitive man long ago constructed his sanctuary on rafts. Buried in thick turf were votive offerings, including well-preserved wooden dishes, decorated with naturalistic birds and elk, canoe paddles, arrows and grapples, and even boomerangs. Situated on the bank, not far from this sanctuary, were settlements which reveal that the inhabitants were hunters and fishermen, using well-tempered pottery, and were already acquainted with casting in moulds, a technique borrowed from Fatianovo culture contacts.

The Bronze Age in the Caucasus, in spite of collections in museums and in private hands, remained for a long time completely unstudied. Only the objects excavated from Maikopol kurgan, brought at the end of the third millennium from Mesopotamia, a large number of "Kobanian" bronzes from the northern Caucasus, painted pottery from Kizil-Vank related to that of Susa, and the varied collection from the late Haldskii kurgan in Transcaucasia, proved the cultural

attainments of the Caucasians and their trade relations with the ancient Near East.

Excavations on Shingavit Hill yielded the most primitive agricultural settlements in the Caucasus. Their inhabitants knew at least one metal—copper—and they still continued to use extensively stone weapons and archaic pottery. The succeeding stage of Transcaucasian culture appears far more developed. From the type locality this stage was called "Elarskian," its characteristic being a persistent use of bronze associated with an extensive pastoral and agricultural economy. In addition, their pottery was polished.

The flowering of material culture during the Elarskian phase corresponded with their highly developed social organization, apparent in their tombs. Near Lake Sevan, beside ordinary graves, was a rich tomb, probably of the tribal chief, who lay on a chariot surrounded by human skeletons.

The development in Transcaucasia during the Elarskian phase was shown by the work of B. A. Kuftin[13] at Tsalka in Georgia. Here were examined various monuments, throwing light on the history of the region from the Paleolithic period to the Sasanian epoch. Among these the so-called "Big Kurgans," attributed to the first half of the second millennium, contained large tombs.

The chieftains lay on chariots surrounded by weapons, ornaments, and painted pottery. Among the finds were some golden goblets encrusted with stones, silver buckets and goblets, decorated with reliefs representing animals and religious processions, resembling Hittite designs. Other articles lie typologically between the Mesopotamian, Hittite, and even the Cretan-Mycenaean objects.

In recent years much work has been done in the history of Urartu. At Karmil-Blur Academicians I. A. Orbeli and B. B. Piotrovskii discovered an Urartian fortress of the time of the Scythian invasion. The archaeological-linguistic studies of Academician Ivan Meshchaninov have widened our knowledge of the history, language, literature, and archaeology of Urartu.

Soviet archaeologists first studied the Bronze Age in Siberia. A. P. Okladnikov discovered in the Baikal area and on the Angara River stages in the development of Neolithic culture in the great forest region (*taiga*) of Siberia. This shows that there were two stages, the Isakovskaian and the Serovskaian, representing the original ancient Neolithic culture.

Concerning the third stage, the Kitaiskaian, this shows the same survival of the Neolithic régime in the *taiga* just as the "Reliktovian" Neolithic survived in the forest zones of the European part of the U.S.S.R. In the epoch, when

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13 See footnote 1.

in the taiga zone of Siberia the Neolithic way of life continued to exist (i.e. in the Kitaiskaian), in the far more southern steppe zones of Siberia, the tribes were already familiar with copper and bronze, which played a very important part in their economy.

Investigations of S. A. Teplukhov, G. P. Sosnovskii, and S. V. Kiselev have shown that the culture of the Bronze Age in Siberia passed through three stages: the Afansevo, the Andronovo, and the Karasuk. The first is contemporary with the Kitaiskaian stage wherein developed cattle-raising and metallurgy. The second stage is distinguished by the development of agriculture in a settled community, and also for an increase of inter-tribal connections. The last led to a great cultural unity between the different regions of Siberia and the Urals. In the Ural region the Andronovo culture continued to the end of the Bronze Age and proves to be the origin of the local Scytho-Sarmatian culture. However, between Karagand and Yenisei there appeared in significant numbers newcomers from northern China, migrating as a result of the expansion of the Shan-In and the earlier Chou Empires. Under the influence of these new elements expanded the Karasukian phase of the Bronze Age, reflecting the unity of the inhabitants of southern Siberia, which according to Chinese chronicles is ascribed as the union of the Din-Din tribes. This phase is the foundation of all further development in southern Siberia.

The investigations of S. P. Tolstov have thrown new light on the history of Central Asia during the Bronze Age only in recent years. His discoveries of the Kelte-Minar sites have shown the link between the culture of the early bronzes of Khwarazym and the Afanasevo culture of the Siberian steppes on one hand, and the "Round Culture" as painted on Near Eastern pottery, especially from Anau, on the other. Much later during the Tazabagiabskaian phase at Khwarazym were revealed culture contacts with the north. For example, the pottery is strongly reminiscent of the Andronovo culture of western Kazakhstan.

Greek colonization of the Black Sea region has for a long time attracted the attention of Russian archaeologists. In recent times work has been concentrated at Olbia (Olvia) and in the cities of the Crimea and on the Taman Peninsula. At Olbia the area around the port was examined. Excavations were conducted at Kerch, near Kamish-Burun, and also at Tiritaka and Myrmikia. Fish-salting cisterns were uncovered.

The increase of knowledge of the Greek period of influence in the Black Sea region has been brought about in great measure as a result of V. L. Blavatskii's excavation of the fortress Charaxes at Ai-Todor, surrounded by fortifications,

public buildings, and a native necropolis. From this region undoubtedly came the Tamanskian marble sarcophagus and the "barbarian" statue found during 1940 at Anap.

A study of the temple at Garn reveals the influence of the first Tiridatian epoch on Transcaucasian culture. Excavations at Armazi-Mtskheta near Tbilisi (formerly Tiflis) under the leadership of Academicians I. D. Dzhawachischwili and S. Dzhanashi, threw light on the history of ancient Georgia, by showing the elements of Hellenism and Aramaic culture. At Armazi-Mtskheta the sarcophagi of the ancient Georgian rulers were ornamented with golden Greco-Roman decorations and Greco-Aramaic epitaphs.

Hellenic influence in Central Asia was revealed by excavations in Turkestan and at Khwarazym. At Nissa, west of Ashkhabad, A. Marushchenko discovered a Hellenic figure at this ancient capital of Parthia in the third century BC. The temples, statutes, and reliefs were covered with decoration in the style of eastern Greek art. Near Termez M. E. Masson found parts of Hellenistic friezes, showing the influence of the Buddhistic art of India. These finds illustrate clearly the high cultural level of the Kushanian Indo-Scythian Empire, which was united against Greek domination. In addition, it reveals the depth of penetration of Hellenic culture, which was taught in Central Asia by artist-craftsmen capable of producing such masterpieces of sculpture as the harpist of the Termezian frieze. At Khwarazym Hellenic monuments were investigated by an expedition led by S. P. Tolstov.

Through the study of southern Scythian monuments the close links between the characteristic Scythian elements and the pre-Scythian culture of the late Bronze Age of the Black Sea region were shown. Thus, aboriginal groups were settled among the Scythians. Special attention was paid to the study of eastern Sarmatian monuments. The rich finds of B. A. Grekov in tumuli of the fifth century BC at Blumenfeldt near Saratov demonstrated the tenacity of the archaic elements of Scythian culture in the regions far from the Greek shores of the Black Sea. These excavations added to the Sarmatian material already collected at Pokrov near Orenburg by M. I. Rostovtsev.

Excavation by archaeologists from Saratov of Sarmatian tumuli along the Volga yielded important results. As a result it was possible to distinguish phases of Sarmatian culture to a relatively late period, i.e. the fourth-fifth centuries BC. Here, as in the Black Sea region, the local Bosporo-Sarmatian origin became evident from jewelry, painted and ornamented geometrically with multi-colored incrustations. This ornamentation was previously, without foundation, attributed

to Gothic sources. Other significant finds included the paleo-anthropological studies of the Sarmatian remains from southern necropolises. They prove convincingly the close ethnic link of the Sarmatian tribes with the far more ancient inhabitants settled east of the Urals.

A great deal of material has been collected in recent years which relates to the Scytho-Sarmatian monuments of the more northerly and easterly regions. Long ago attention had been turned to the so-called "Diakovo cities," remains of large fortresses inhabited by primitive pastoral-agriculturalists between the rivers Volga and Oxus. New data, obtained through the excavation of a number of towns, have established the successive cultural phases from the Neolithic period beside the Oxus and the upper Volga. Furthermore, the most ancient of these (e.g. Kashirskaia excavated by V. A. Gorodtsov) are attributed to the seventh and sixth centuries BC, and throw light on the long course of their history up to the sixth and seventh centuries AD.

Since the Diakovo cities are our only source of knowledge concerning the inhabitants of the region between the Volga and the Oxus for a period of almost 1,500 years, the importance of these investigations is understandable. Later we will show the importance of the study of these cities for the problem of the origin of the nor heastern Slavs.

From this standpoint attention is called to the accumulation of materials along the lower Oxus and from buried cities on the borders of the Viatka-Kama region. Studies were made on some contemporary peoples of the Volga and Pri-Kama regions, for example the Mordvas, Udmurts, Chuvashs, etc.

In Siberia numerous Scytho-Sarmatian monuments of the Saian-Altai highlands and in the Pri-Baikal [Cis-Baikal?] area were studied. The highly developed Karasuk culture of the end of the Bronze Age revealed that the inhabitants of these regions attained great success in agriculture, often with irrigation, in military affairs, and in artistic craftsmanship. In addition to weapons and ornaments spread widely over southern Siberia, the so-called "Scytho-Siberian hunting style" shows itself to be very near in form and character to the Scythian (cf. at Seleng, the "Tagarskian" on the Yenisei, and the "Maiemirskian" in the Altai). Analogous conclusions were reached in the Mongolian and Chuvash SSR.

The discoveries of P. Kozlov in the kurgans of Noin-Ul in northern Mongolia of the culture of the northern Huns show, in spite of the Chinese influence, its strong link with the far more ancient "Scythian type" of culture. In Tashtyksian tombs along the central Yenisei were found many statues resembling

stylistically those of the Huns and Sarmatians. The same applies to the Altai, where the great stone kurgans, and especially M. P. Griaznov's excavations at Pazyryk have brought to light objects decorated with pictures of animals and scenes of their struggles. In addition were found statues of felt and leather objects, all richly ornamented in the Hunnish-Sarmatian manner. The cultural unity here of the inhabitants of the steppes, as during Scythian times, was unusually strong. During this period the formation of the physical type of the peoples of Central Asia took place. This is particularly well illustrated by the splendid "portrait" galleries of the second millennium BC, i.e. collections in Tashtykskian tombs of the central Yenisei. These include plaster death masks with a mechanical device for removing them from the face of the dead before their cremation. These masks prove the extent to which the ancient Paleo-European type, dominating the steppes of Siberia during the Bronze Age, disappeared in the Yenisei district and was changing into the new Mongolian type.

The Hunnish-Sarmatian period is characterized by significant cultural links with southern Siberia, Iran, and China. In the tombs of Tashtykskian nobility on the Yenisei ceremonial Chinese parasols, presented by the Chinese Emperor to the leaders of the allied tribes together with a number of other Chinese wares, were also found. In this connection of particular interest were the discoveries, made by E. A. Evtiukhova and V. P. Lovashev in 1941 at a site near Abakan, of the ruins of a palace of Chinese architecture, covered with tiles with Chinese writings of the Han dynasty.

The recent excavations at Ust-Polui near Salekhard—where on a sacred site were found carved bone combs and spoons, decorated with ornamental animals—show how far the tradition of Hunnish-Sarmatian art had penetrated. According to V. N. Chernetsov, these finds will make possible the clarification of many questions concerning the presence of southern elements among the Ugrians of the Ob area.

The inhabitants of southern Siberia during the sixth and seventh centuries AD already had built up a strong government with a highly developed culture, serving in many respects as a model for all the nomadic tribes of the western steppes. The Altaian tribe (whose culture has in recent years been well described thanks to the excavations of A. Glukhov, S. V. Kiselev, and L. Evtiukhova) organized in the sixth century the great Turkic state ("Tugu" in Chinese chronicles) encompassing the stretch of territory from Bolshaya Hingan to Zeravshan and from China to the Altai.

Kirghiz monuments paint a clear picture of the high development of culture of that people who were previously the great rivals of the Orkhon Turkics in central Yenisei. The finding of agricultural tools of that period speaks for their high level of agriculture. These were entirely Kirighizian tools. Especially remarkable were the objects discovered in Kirghiz tumuli by Evtiukhova and Kiselev at Kopeny on the Yenisei. Golden vessels with elaborate ornamentation, saddles decorated with hunting scenes, and richly caparisoned harness reveal the attainments of Kirghiz craftsmen.

At Semireche A. N. Bernshtam has been examining the towns and tombs of the western Turkish Kaganate.

Significant results have been obtained by S. P. Tolstov in the Kizil-Kum Desert and at ancient Khwarazym. These expeditions have located in this desert cities, fortresses, and castles of the early middle period of Khwarazym. The trade and economic life of this former oasis were revealed. Tolstov was also able to decipher the ancient Khwarazymian alphabet, showing its relationship with that of the Orkhonskian Turkics.

During 1937 V. A. Shishkin excavated ancient Varakhsh west of Bukhara. Here, in the ruins of a palace was found a finely carved decoration like a sculptured relief, depicting birds, fish in the water, people, trees, branches, and leaves. This sculpture surpasses the Abbassid decorations at Samarra and was the model for the ancient Sogdian art of the fourth-fifth centuries, obviously related to the early Sasanian of western Iran. The frescoes at Varakhsh, representing fighting elephants, indicates not only their cultural attainments but also their links with India. Divastich found in a castle built by the last ruler of Sogdiana on Mount Mugh in Tadzhikistan documents written in Sogdian, Chinese, ancient Turkic, and Arabic. These throw light on the condition of Central Asia on the eve of the Arab conquest.

Excavations and restoration of Khwarazymian monuments in Central Asia have been carried out on those attributed to the Mongolian conquest and especially on Timurid monuments.

Among the investigations of monuments of the early Middle Ages in the southern European part of the U.S.S.R., the excavation of the Tatar fortress at Sarkel is of especial interest. The objects show that the material culture of the Tatar period was not one-sided, because Academician U. V. Gote has demonstrated Sarmatian-Alan elements complicated by the influence of nomadic culture akin to the Turkic-Siberian. Evidently this reflects the ethnic complexity of the

Tatar Empire—the outpost of the western Turkic khanate on the Volga and in the Caucasus.

Recent years have brought about a sharp change in the study of the early rival of the Khazars—the Bulgars of the Volga. Extensive excavation of the Bulgarian city of Suvar and its necroplis enabled A. P. Smirnov to distinguish objects up to the Tatar period, especially Bulgarian. Of particular interest were the constructions of the eastern Banat of Bulgaria with their central heating, fountains, and pipes supplying hot and cold water. Study of the whole complex of the Bulgarian material allowed Smirnov to draw his conclusions regarding the origin of Bulgarian culture. According to his calculations they formed a part of the tribes settled along the Volga, leaving for present-day excavation the *gorodischche* with the "matte-keramik" and traces of the nomad cattle-breeders from the Sarmatian tribes. The culture of the Bulgars originated in a definite form in the Volga-Kama region and during the period of the Golden Horde.

Excavations were undertaken, chiefly by archaeologists from Saratov, on all the important ruins of the cities of the Golden Horde along the lower Volga, including Sarai-Batu, Sarai-Berke, and Uvek. These excavations, the results of which have only been published in part, yielded a great deal of material by which it is possible to form a conception of the architecture and characteristics of the city life of the Golden Horde. As a direct result of specialized investigations, such as the study of the pottery by A. U. IAkubovskii, there was revealed a great complexity in the culture of the cities of the Golden Horde and their strong dependence upon those cities of the East and West whose inhabitants had been forced to migrate to the Volga.

Researches have also been conducted in recent years upon medieval monuments of the Crimea and the Caucasus. Excavations of the great Crimean Gothic[14] cities on the Mangul and at Eski-Kermen have especial significance. They prove the locality from which the Sarmatian-Greek cultures originated, the importance of the Byzantine endowment, and the actual insignificance of the Gothic influence.

In recent years extensive excavations were carried out in the medieval Georgian city of Dmanis, which played a great rôle in Armenian history. The data thus added have given the first concrete information concerning trade, crafts, and, as everywhere in the Middle Ages, the agricultural life of a typical Transcaucasian town of the eleventh to fourteenth centuries.

As has already been shown, the study of ancient Russia was limited up to

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14 The Goths entered Taurida during the middle of the third century of our era.

the Revolution for the most part to the tumuli of the eastern Slavs. Research work was scarcely ever carried out on the ancient cities. Questions of the origin of the eastern Slavs were solved usually without reference to archaeology. There has been a great change during the past twenty years. Study of the so-called "Romenskian" towns and the South Russian treasure sites of the fifth-seventh centuries has made it possible to place, within the frame of archaeological knowledge, the question of the culture of the Antians and the relation of the Antian union to Kiev Russia. B. A. Ribakov determined the succession relating the culture of the Antians to that of the Slav tribes of Kiev Russia.

A parallel accumulation of data on the late Diakovo *gorodishches* lying between the Volga and the Oxus, and from early tombs of the Viatichians, Krivichians, and the Slovenes of Novgorod, made it possible for a number of archaeologists (in particular P. N. Tretiakov) to describe the process of the development of the northeastern Slavic tribes as a local phase, explaining the entire ancient history of the peoples of the Volga-Oxus basin.

On the basis of data from numerous excavations of Slavic tumuli of the fourth-fourteenth centuries a number of authors have written monographs[15] of historical scope related to the living habits of branches of eastern Slavic tribes.

At Kiev ancient dwellings and defensive weapons were discovered dating from the eighth-ninth centuries. In St Sophia ancient frescoes were cleaned and restored. Portraits of many historical characters, some of them of the family of IAroslav the Wise, were found. Furthermore, the tomb of IAroslav was opened. Here were found two skeletons, that of IAroslav (the lameness from which he had suffered from childhood being evident) and a female skeleton belonging to his second wife, Ingrid. A reconstruction was made by the artist-anthropologist, M. M. Gerasimov.

Excavations in small towns of central Kiev Russia, for example at Vishgorod, have also yielded extensive material, chiefly of city crafts. Especially interesting are the Vishgorod smithies and kilns.

At Raïk near Berdichev, a town burned in 1258 by the armies of Danilo Galitzki, were found a valuable collection of everyday articles of city-dwellers of the thirteenth century, and also a large number of craftsmen's articles, and instruments of blacksmiths, jewelers, makers of weapons, and potters.

On the Taman Peninsula, in the highest strata of the city, was discovered typical Slavic pottery. Slavic penetration can also be seen at a city near Koktebel

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15 A. V. Artzikovskii on the Viatchi, B. A. Ribakov on the Radimichi, and P. N. Tretiakov on the Krivichi.

in the Crimea. The research of M. I. Artamonov on the Don and excavations at Sarkel have shown that during the eleventh century the Don was an intensive Slavic region, particularly Chernigov.

The excavations of A. V. Artzikhovskii of the Historical Museum at Novgorod the Great included the entire quarter of the Slavensky hill, the court of IAroslav, Torg, the Rurik *gorodishche* and other places. As a result, abundant material was obtained for the characteristics of the city life of ancient Novgorod. It was not only well-fortified earlier than any of the medieval cities of western Europe, but as early as the eleventh century it had conduits and canals. The most interesting and extensive material was obtained by the excavation of huts of shoemakers and potters. The finds made it possible to reconstruct the process of manufacture.

Excavations at Torg revealed sites of former rows of village stalls where they traded the local products. Here was found a large quantity of seeds of cereals, vegetables, berries, and fruit. This allows one to sketch a detailed picture of the agricultural economy in the regions around Novgorod the Great.

Extensive excavations have been carried on under the leadership of V. I. Ravdonikas in the region of Old Ladoga.

In 1926 V. A. Gorodtsov excavated Ryazan, burnt on December 23, 1237 by Batu. In the huts were found many everyday articles abandoned by the defenders during the storming of the town. Master-craftsmen's objects were examined; among them a smithy with tools and a workshop for making amber ornaments. Similar materials were collected at Suzdal and Vladimir. N. N. Voronin excavated the residence of Andrei Bogoliubski (1157-1175) at Bogoliubov. Examining the territory joined to the famous castle by trenches, Voronin discovered ruins of arcades covering paths which connected the Prince's palace with the castle and the church. Important architectural details were discovered by cleaning the church walls.

Excavations of recent years have made it possible to explain the conditions of the ancient Russian cities in the epoch of feudal disintegration. N. P. Milonov excavated the Tver and Dmitrov kremlins, at Kolomna (twelfth century), at the Pronski *Gorodischche*, and at the ancient Radonej near Zargorska, while excavations of S. A. Tarakanov were also made in the Derevskian pentagon of Novgorod the Great.

The first large-scale archaeological study in Moscow was under the auspices of the Patriarch of Moscow. Observations and excavations carried out from day-to-day during building enabled not only the reconstruction of the archaeo-

logical profile of the city, but also the study of a number of districts. Similarly, it was possible to reconstruct the system of fortification of Zemlianov and Belgorod and to investigate the castle and the walls of Kitai-gorod.

Part of the site of the Palace of Ivan IV's life-guards was discovered. It was also possible to trace a number of streets, prominent buildings, churches, monasteries, and country houses formerly within the boundaries of the city. On these sites a quantity of ammunition was collected. Here also were valuable garments of the Muscovite nobility of the seventeenth and eighteenth centuries, weapons, and a quantity of everyday objects.

THOMASVILLE
GEORGIA

DID THE SINAGUA OF THE VERDE VALLEY SETTLE IN THE SALT RIVER VALLEY?[1]

ALBERT H. SCHROEDER

WHEN THE WRITER completed a stratigraphic survey of the Salt River valley of south central Arizona in 1939, he found himself confronted with the same perplexing occupational disease that strikes all archaeologists on completion of an excavation or survey—questionitus. The results of the survey and test trenching produced some tangible results: some problematical questions were cleared up. But in their stead appeared more complex problems. For example, why did the Hohokam of the Salt River valley obtain trade ware from the north up to about 1150 AD and then abruptly turn to the northeast for their trade?[2] Why did red ware suddenly put in an appearance about this time and where did it come from? The same question can be asked in regard to several new traits that were introduced about 1150, namely, extended burials, surface walls and contiguous rooms, and the technique of smudging and polishing pottery.[3] What did it all mean?

The Saladoans, who lived to the north and east in central Arizona, have generally been considered responsible for the introduction of these new elements. They buried their dead; they made red pottery; they built surface walls and contiguous rooms; they smudged and polished pottery. These new traits have been thought to mark the beginnings of a contact with the Saladoans, while the main Saladoan groups did not arrive until about 1300 AD.[4]

The results of the survey did not fit the accepted picture too well. The new traits appeared in great quantities prior to 1300 and imply more than a mere contact with a neighboring group. Surface walls and large mounds were erected prior to 1300. Redware (and the technique of smudging) was dominant, aside from plain ware by 1300. The presence of burials with pre-1300 associations is further evidence of outsiders among cremating peoples.[5] If we are to accept the

1 The writer wishes to express his gratitude to Dr Harold S. Colton and Dr Erik Reed for their comments and helpful suggestions.

2 Schroeder, 1940, p. 130.

3 *Idem*, p. 150.

4 Gladwin, 1935, p. 212; also Haury, 1945, p. 204.

5 Schroeder, 1940, pp. 147 and 150.

TABLE 1

Associations of intrusives.

ASSOCIATIONS OF INTRUSIVES			PHASES OF THE SALT RIVER VALLEY	CIVANO	SUNO	SACATON	SANTA CRUZ	GILA BUTTE	UNPLACED (Survey)
AREAS	INTRUSIVE TYPES	DATES		1100	1150	1300	1350	1400	
San Francisco Mts., Lower Little Colorado River and Hopi Buttes	Walnut Mound B/W	pre 750					1	2	
	Kana-a B/W	700 - 900				2	6	2	
	Deadmans B/R	800 - 1060				2	4	1	
	Deadmans B/G	700 - 1100				7	5	1	1
	Medicine B/R	ca 800 - ca 950					1	1	
	Deadmans B/W	800 - 1100				7	2	1	1
	Tusayan B/R	1050 - 1150				6	1	1	
	Dogoszhi B/W	1075 - 1150							1
	Sosi B/W	1075 - 1150							11
	Sudduth B/O	1325 - 1600							2
Middle Little Colorado River and Hopi Buttes area	Nide Run B/W	ca. 1275							1
	Showlow B/R	pre 1200							2
	Pinedale B/W	1250 - 1350			2				3
	St. Johns Poly.	1100 - 1300			1				
	Pinedale B/R	1200 - 1300			5				1
	Pinedale Poly.	1250 - 1325			1	1			
South of Mogollon Rim	Roosevelt B/W	1300 - 1300			5	4+	1+		3
	Fourmile Poly.	1250 - 1400	2		1				1
	Salado Red	1150 - 1350			1				
	Gila B/R	1200 - 1400	1						
	San Carlos R/Br	1300 - 1375			1				
	Tonque Verde R/B	1200 - 1400	23		1				1
	Hinkbrot Ballfarm B/W	ca 900 - 1000					1		
	Ramos Poly.	ca. 1300 - 1400							2

+ - Identified as pre-Roosevelt B/W

Sherds identified by Dr. H.S. Colton & Dr. E.W. Haury

theory that the Saladoans moved into the valley about 1300, who was responsible for these developments between 1150 and 1300?

The accompanying tables will illustrate the problem more graphically. Table

1 lists the association of intrusive pottery types encountered in the Salt River valley.[6] As these intrusives were assigned to the dominant phase represented in each artificial block removed from the trashmounds, it must be kept in mind that in many cases two phases occurred in one block, thus accounting for apparent discrepancies in the chart. The severe break between the Sacaton and Soho phases, as well as the shift in source of trade ware from north to northeast at this time, are quite obvious.

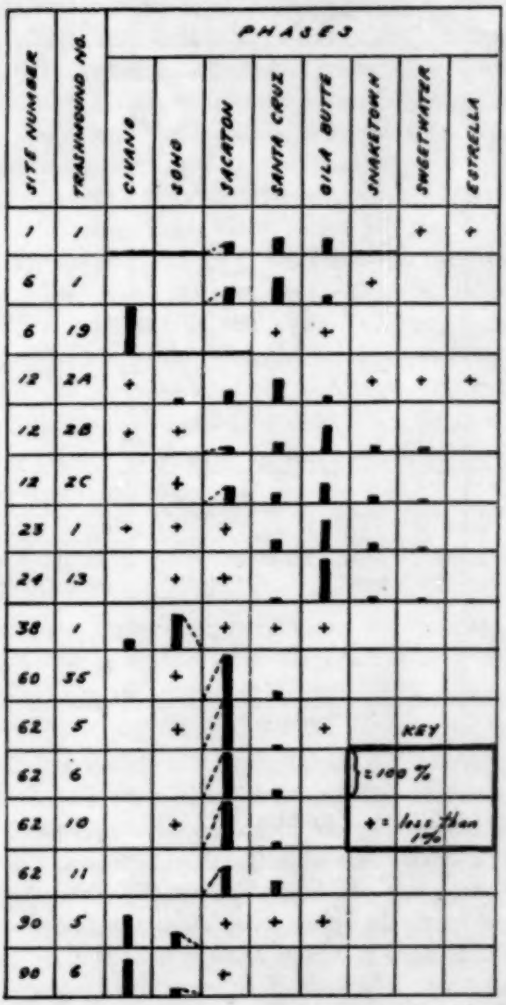
Table 2 graphically shows the pottery content representative of each phase in the trashmounds trenched.[7] Again note the unconformity between the above mentioned phases. One point should be mentioned in this regard. Many of the sites in the valley have surface sherds representing all phases from Gila Butte through Civano, but of the 16 trashmounds tested, none had rubbish of both the Sacaton and Soho phases in any great quantity. Site 6 in this table brings out this condition occurring at the same site in two trashmounds. Perhaps this may be a result of a coincidence in selection of trashmounds for trenching. More work would be required to substantiate this data if we are to be on a more solid footing. Regardless of future results, however, this condition occurring along with other factors seems to imply some sort of cultural disturbance.

Noting the shift in trade, it was felt that possibly remains in the region north of the Salt River valley might have some bearing on the problem. A glance at those of the Verde valley presents an interesting situation. The following is a summary of the archaeology of that region as noted by Colton in his latest publication.[8] The earliest group to enter the Verde valley came up from the south and settled as far north as Bridgeport,[9] building jacal-like structures, making red-on-buff pottery, building ball courts, cremating their dead, and irrigating their fields. To date, no evidence of these villages surviving beyond 1150 in the Verde valley has been noted in surface surveys. This group was apparently a branch of the Hohokam. A second group later moved down from the plateau north of the Verde valley, and settled along the base of the escarpment. Dr Colton has identified this group as the southern Sinagua. He also notes that a gap of 10 to 15 miles of uninhabited territory separated these two peoples. About 1125, cliff pueblos appeared along the escarpment and the Sinagua began to cross the uninhabited strip to mingle with or replace the former Hohokam-like inhabitants. The question arises, could this move of the Sinagua into the middle

6 *Idem*, fig. 11, opposite p. 131.
7 *Idem*, p. 182.
8 Colton, 1946, p. 304.
9 H. S. Colton, correspondence (1947).

TABLE 2

Phases occuring in trashmounds.



Verde have any connection with the new traits introduced into the Salt River valley after 1150?

Table 3 lists the new traits appearing in the Hohokam culture in the Salt River valley about 1150, as well as those occurring about 1300, and a comparison

TABLE 3

Comparison of traits.

	TRAIT	Salt River Valley ca. 1150	Southern Sinagua	Salado	Salt River Valley ca. 1300
NON-HOHOKAM	Extended burial	+	+	+	+
	Oriented to East	−	−	+	+
	Offerings - few to none	+	+	−	−
	- many to few	−	−	+	−
	Location refuse	+	+	+	+
	- under floors	− ?	+	+	+
	Children	− ?	+	+	+
	Adults	− ?	rare	+	+
	Head deformation	occipital	occipital	occipital	occipital
	Head form	?	mesocephalic ?	mesocephalic ?	?
	Contiguous rooms	+	+	+	+
	On hills	+ −	+	+	−
	On mounds	+	−	−	+
	Compound walls	+ ?	+	?	+
	Forts	+	+	?	+
	Masonry				
	Massive	+	+	+	+
	Rubble fill	+	+	?	− ?
	Heavy mortar content	+	+	?	+
	Paddle & anvil pottery	+	+	−	+
	Coil-scrape pottery	−	−	+	−
	Redware	+	+	+	+
	Smudging	+	+	+	+
	Polishing	+	+	+	+
	Polychrome	−	−	+	+
HOHOKAM	Shell work				
	Species in number	Many	Moderate	Few	Few
	Exchanges	Specialized	Semi-specialized	Non-specialized	Non-specialized
	Irrigation	Controlled	Flood controlled	Flood water	Controlled
	Stone work				
	Metates	Well shaped	Well shaped	Not well shaped	Well shaped
	Medicine Stones	+	+	−	?
	Clay objects				
	Human type spindles	+	+	−	+
	Disc type spindles	+	+	+	+
	Animal figurines	+	+	+	?
	Human figurines	+	+	?	?

⟷ difference between Sinagua and Salado

is made with similar traits as found among the Salado and Sinagua. A more inclusive comparison using other traits might be misleading, as the Sinagua had opportunity to absorb much of the Hohokam culture prior to 1150. They were introduced to the ball court, vesicular basalt cylinders, and cremations by the Hohokam at Winona, east of Flagstaff about 1070, and they saw controlled irrigation practised by the Hohokam when they came into the middle Verde.[10] By 1150, then, the Sinagua had been strongly influenced by close contact with the northern Hohokam. The lack of adequate knowledge of Salado culture increases the difficulty. The point is, however, that the traits which were introduced into the Salt River valley about 1150 were shared by both the Sinagua and Salado.

10 Colton, 1946, pp. 270, 288, 295, 304; see also McGregor, 1941, p. 381.

A further analysis of the individual variations reveals points in favor of the Sinagua. The pottery introduced at 1150 is a paddle-and-anvil redware with obvious polishing streaks similar to the type manufactured by the Sinagua and not a polished coil-scrape ware such as the Salado made. The burials encountered on the Salt River valley survey, only three in number, were found in trashmounds without any offerings.[11] They were intrusive in Santa Cruz and Sacaton rubbish in trashmounds. They undoubtedly belonged to the Classic period, but there is no way of determining whether they were pre-1300 or post-1300 burials. At Pueblo Grande, just east of Phoenix, Hayden uncovered burials of the Soho phase with redware offerings.[12] Dr Haury points out that not a single case of a burial in a trashmound was recorded at Los Muertos in the southeastern fringe of the Salt River valley; that burials occurred within the confines of a court or beneath house floors; and that Gila and Tonto Polychromes were associated—all of which he compares favorably with the Saladoan method of burial.[13] On the basis of the polychromes associated at Los Muertos, the burials would have to be assigned to the Civano phase, 1300-1400. The Sinagua form of burial usually occurred in refuse.[14] Evidence for two methods of burial is indicated—one Saladoan and the other Sinaguan.

With the evidence favoring the Sinagua, a check was made of the intrusive pottery found at Tuzigoot[15] and Montezuma Castle[16] National Monuments in the Verde valley for comparison with the situation in the Salt River valley. Thanks to the intensive research of the Museum of Northern Arizona one is able to make such a comparison and obtain tangible results. The map (Figure 1) bears out the similarity in the sources of trade for both valleys. Tusayan Corrugated and Moenkopi Corrugated, found in the Verde valley, were not included as they overlapped the arbitrary 1100 AD division. However, their inclusion would not materially affect the trend shown; namely, that the people of the Verde and the Salt received trade ware from the north up to 1100 or 1150, and that after that date there was a gradual shift of their source to the middle Little Colorado River area and south to the Mogollon Rim. The only exceptions noted were four types in the Verde that came from the Tsegi area, which were appar-

11 Schroeder, 1940, p. 85.
12 J. Hayden, manuscript in preparation.
13 Haury, 1945, p. 43.
14 Colton, 1946, p. 294; see also Caywood and Spicer, 1935, p. 95.
15 Caywood and Spicer, 1935, p. 48.
16 From files at Montezuma Castle National Monument.

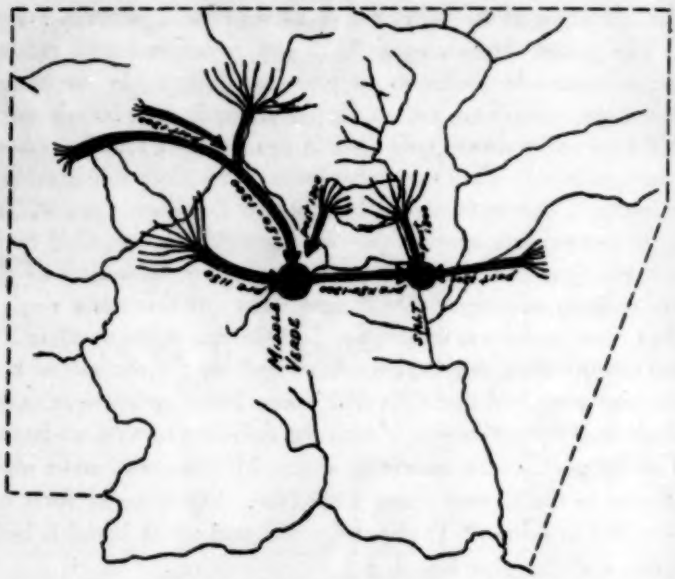


FIG. 1. Source and time of intrusives in central Arizona.

ently traded southward during the period of rebuilding in the Tsegi in the 1200's. The types and dates were:[17]

Tusayan Polychrome	1175-1250
Tusayan Black-on-white	1225-1300
Kayenta Polychrome	1270-1280
Kayenta Black-on-white	1275-1300

From all appearances the trade ware received by the Salt and Verde areas depended on the shift of cultural centers along the Little Colorado River.

In tracing the history of architecture we find that surface masonry was adopted by the northern Sinagua in the Flagstaff region between 1120 and 1130.[18] This was the nearest contact of the southern Sinagua and probably the source from which they obtained the idea of masonry, as cliff pueblos appear among the southern Sinagua about the same time along the base of the escarpment, namely

17 Dates of these and other pottery types considered were obtained from the *Handbook of Northern Arizona Pottery Wares* of the Museum of Northern Arizona and revised dates from *The Sinagua.*

18 Colton, 1946, p. 271.

1125 AD.[19] Colton notes that surface dwellings among the northern Sinagua took the form of sites in the open, defensive sites on hills, cliff dwellings, and cavates.[20] The same are also found in the Verde. Along with masonry the southern Sinagua introduced other traits into the Verde—red ware, smudging and polishing of pottery, extended burials, and the practice of occipital deformation—all of which correspond to those introduced into the Salt. Strangely enough, they rarely made any decorated pottery, which is one of the diagnostic traits of the Sinagua.[21]

The Verde Sinagua architecture in almost every case was that of a "defensive type"—on hills, in caves, or near a fort on a hill built for purposes of refuge. In the Salt River valley stone building material was lacking and the desert flat. With the introduction of new traits into the Salt area, surface caliche retaining walls, sometimes rock filled, also appeared and were used to encompass mounds elevated above the level of the desert—apparently a defensive move. Associated with this new type of architecture is the sudden discontinuance of dumping refuse on pre-1150 trashmounds and the beginnings of new trashmounds in different localities. It was the writer's impression in 1939 that this trashmound situation, the lack of an overlap between the Sacaton and Soho phases, signified an abandonment of the region by the Hohokam, since so little of their culture remained in evidence in trashmounds of the Classic period.[22] In view of the above, it seems that there may have been an abandonment of sites in favor of new localities with a dominance of Sinagua traits following the relocation. The Hohokam jacal-like houses could easily have been abandoned and new ones built closer to the large mounds for protection when a relocation was affected. The Hohokam apparently became acquainted with the value of and use of defense sites about 1150, if one can judge from the three boulder sites noted on the survey. Others were reported, but due to the amount of work on hand in the valley proper, they could not be checked. However, the three sites visited yielded the following phase associations as indicated from surface pottery:[23]

Site 3 —	Civano 72 %	Soho 16 %	Sacaton 12 %
Site 31 —	Civano 38.5%	Soho 12.5%	Sacaton 50 %
Site 83 —	Civano 66.7%	—	Sacaton 33.3%

19 *Idem*, p. 304.
20 *Idem*, pp. 271-273.
21 *Idem*, pp. 303, 307, 308.
22 Schroeder, 1940, p. 154.
23 *Idem*, pp. 61-63.

Whether these sites were used by certain of the Hohokam in an attempt to ward off the Sinagua is difficult to ascertain. The sites visited and others reported were located to the west and north of Phoenix.

The situation as outlined implies a rapid diffusion of traits from the Flagstaff area into the Verde valley and down into the Salt. But on the other hand this represents more than the span of a single generation—sufficient time for the acceptance or rejection of traits. Moreover, there is one general theme throughout that may have played a part in this rapid diffusion—the amiability of the Sinagua and the Hohokam. It is evident at Winona, in the Verde area, and around Phoenix as well, if this hypothesis bears weight. In all cases, however, the Sinagua seemed to have dominated. They completely absorbed the Hohokam, admittedly a small group, that moved to Winona about 1070.[24] They may also have absorbed the Verde Hohokam in their move south to the Salt about 1150. However, Verde Hohokam traits in post-1150 times are rare, and it seems more probable that they joined the Sinagua in moving south. That the Sinagua lived side by side with the Hohokam in the Salt valley is postulated here on the basis of foregoing evidence, as again, that they evidently dominated the area by 1300.

About 1300 a few traits assigned to the Salado appeared in the Salt valley—the practice of extended burials, oriented to the east, with pottery offerings of Gila Polychrome, and a higher polishing technique on pottery which may have brought about the gradual development of Gila Red and Smudged (1150-1300), with its conspicuous polishing streaks, into that of Salt Red and Smudged (1300-1400) which is more highly polished. With the Sinagua well established in the Salt valley by 1300 as outlined, reception for the Salado traits was simplified, as the basic complex of traits of these two groups was similar in many respects. Because of their many similarities it is sometimes difficult to distinguish between their respective traits. For example, as a rule the Sinagua burials in the Verde valley occur in rubbish, but often infant burials as well as occasional adult burials occur under house floors.[25] If pottery offerings were not associated in the latter cases, one could not definitely assign such under-floor burials to one group or another, especially in the occurrences in the Salt valley. Perhaps, because of these many similarities, the Saladoan traits are not as evident in the Salt area. A more intensive comparison of the material culture of the Salado and Sinagua is necessary. Trash-mound yields other than pottery are too few for such an analysis, and for this reason such a comparison is not undertaken in this paper. Other

24 Colton, 1946, pp. 295, 301.
25 Caywood and Spicer, 1935, p. 95.

TABLE 4

Correlation of Classic Period wares.

SITE →	SITE 38			SITE 90		SITE 6		
NO. OF SHERDS →	54,142			15,715		11,625		REMARKS
LOCATION → / TYPES ↓	TRENCH 1	TRENCH 2	TRENCH 3	MOUND 5	MOUND 6	MOUND 17	MOUND 15	(1) Percent of type to ware (2) Percent of ware to total wares
Gila Red (1)	72	65	63	18	13	6	2.5	decrease
Salt Red (1)	28	35	37	82	87	94	97.5	increase
Casa Grande R/B (2)	9.8	7.1	7.6	1.9	1.8	.4	.5	decrease
Polychrome (2)	3.6	3.7	5.4	0.0	.03	.9	.27	decrease
INTRUSIVES	DATES		Site 38	Site 90		Site 6		PHASES
Deadmans B/R	800 - 1060		3					Site 38 - Middle Sobo thru Middle Cuano phase
St Johns Poly.	1100 - 1200		1					
Salado Red	1150 - 1350		1					
Pinedale B/R	1200 - 1300		4					
Roosevelt B/W	1200 - 1300		4			3		Site 90 - Late Cuano phase
Pinto Poly	1200 - 1300		31			8		
Tonque Verde R/B	1200 - 1400		1	1		25		
Pinedale B/W	1250 - 1325		2					Site 6 - Late Cuano phase
Pinedale Poly	1250 - 1325		1					
San Carlos R/Br	1300 - 1400		1					
Gila Poly	1300 - 1400		656	7		104		
Tonto Poly	1300 - 1400		48	2		3		
Fourmile Poly	1350 - 1400		1			1		

similarities noted by Gladwin,[26] when comparing the new traits in the Gila area with those of the Salado, have their counterpart in the Sinagua: burial in earth, often under the floors of rooms; use of turquoise in making pendants; necklaces; worked stone, bone, and shell.

It might be also noted here that Hastings, reporting on excavations at Casa Grande, mentions operation II which he identified as Classic containing Pueblo III intrusives, red-on-buff pottery and Gila Red, but no polychrome other than some sherds found on the surface.[27] This condition is similar to that of the Soho phase in the Salt valley. Gladwin also points out that three Classic sites on the Gila (encountered on the Gila Pueblo survey) contained only red-on-buff pottery and no polychrome.[28] There is, of course, one thing that should be kept in mind: some of the Hohokam may have continued to live separately from the Sinagua and Salado. Future comparison of the Salado and Sinagua traits as recorded in the Gila and Salt valleys should prove interesting in this respect.

With the postulated influx of Sinagua beginning about 1150 and the coming of an uncertain number of the Salado between 1300 and 1350, the Salt River valley must certainly have reached its population saturation point in the 14th century. With overcrowded conditions, any of the following factors may have played some part in the breakdown of the Civano phase culture: exhaustion of the agricultural land, of which a maximum of 20,000 acres could be irrigated at any one time;[29] development of social disease, such as dysentery, brought about by close communal living; or stagnation due to a lack of outside contacts and trade. Perhaps the Saladoan influx tilted the scales, causing the final unbalance.

It is during the Civano phase that the Salt River area exhibits a preponderance of non-Hohokam traits. The dominance of the long-bitted axe, and the increased use of the technique of abrading stone, and the almost complete dominance of utilitarian artifacts, coupled with an increase in polishing stones, are marked. Shell work degenerated into simple articles manufactured by a grinding technique only. No evidence of cremations was encountered in trashmounds.[30] Haury noted at Los Muertos that all cremations, with few exceptions, were associated with red-on-buff vessels, and the few exceptions were polychrome.[31] Burials were numerous. Seven trenches at three sites on the survey revealed a most in-

26 Gladwin, 1935, p. 252.

27 Hastings, 1934, p. C.

28 Gladwin, 1935, p. 258.

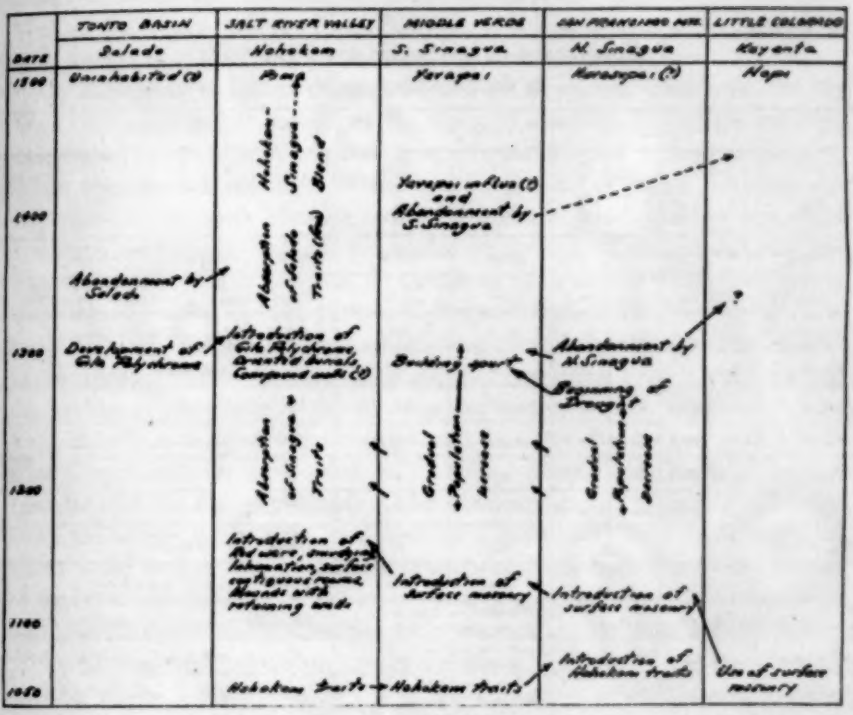
29 Correspondence with the late T. A. Hayden, 1939, Assistant Chief Engineer, Salt River Valley Water Users Association.

30 Schroeder, 1940, p. 153.

31 Haury, 1945, p. 43.

TABLE 5

Postulated cultural development.



teresting trend in pottery (see Table 4).[32] As Salt Red increased and became the dominant redware, the decorated pottery decreased in relation to all pottery manufactured. All of the evidence seems to indicate a gradual assimilation of Hohokam and non-Hohokam traits.

From about 1400 AD until the arrival of the Spanish, who found the Pima living in the area under discussion, we have no evidence with which to reconstruct the history of the prehistoric inhabitants. However, the above trend—the blending of material traits of two groups—coupled with a return to rancheria style of living is not a far cry from Pima culture. The postulated development of the Hohokam and Sinagua from 1050 until 1540 is outlined graphically in Table 5. Postulated, but not mere speculation. The merging of traits is evident in late

32 Schroeder, 1940, pp. 114-116.

Civano times. With 150 years in which to mold their culture, the Hohokam-Sinagua relationship could easily have developed to form our historic Pima culture (Table 6).

TABLE 6

Comparison of prehistoric and Pima traits in the Salt River valley.

TIME		PRE 1450				1150 - 1400		POST 1700
PHASE / TRAIT		Snaketown	Gila Butte	Santa Cruz	Sacaton	Soho	Civano	Pima
% of Plain		84.5	85.0	75.2	69.5	68.8	71.3	Main ware
% of Decorated		15.5	14.0	24.8	30.2	11.0	2.7	Occasional amounts made
% of Red					0.3	16.2	25.0	Moderate amounts made
% of Polychrome						2.0	0.4	No polychrome
Plain	Bowls		42.1	52.8	62.1	58.7	63.6	Kitchen use
	Jars		57.9	47.6	37.9	44.3	36.4	Water coolers
Decorated	Bowls	82.2	68.3	58.3	45.6	0	0	None ?
	Jars	17.8	31.7	41.7	54.4	100	100	Jars only?
Red	Bowls					78	71	Mainly bowls ?
	Jars					22	29	Few jars - caches
Pottery Manufacture		Paddle-n-anvil				Paddle-n-anvil + polishing		Paddle-n-anvil + polishing
Architecture		Jacal-like				Jacal-like + adobe walls		Jacal, thatch, wattle + daub
Irrigation		Controlled				Controlled + flash flood		Controlled + flash flood
Burial		Cremation				Cremation + inhumation		Inhumation, Warriors cremated
Shell		Specialized				Semi-specialized		Non-specialized - little used
Stone		Ornate + varied				Non-decorative		Utilitarian - non decorative

This "gap" between 1400 and 1700 remains untouched by the historian and archaeologist. A listing of Pima traits as compared to archaeological traits admittedly cannot be made. However, a few similarities might be noted in the way of further comment. In the Verde valley, pole-covered burials, averaging three and a half feet below the present surface, are often encountered in the valley floor.[33] Russell's informants stated this was the earlier type of burial of the Pima, though these were said to have been practically surface burials.[34]

33 Spicer and Caywood, 1936, pp. 72-73; see also Jackson, 1933, pp. 75-83.

34 Russell, 1908, p. 193.

Also encountered in the Verde valley are graves which were undercut at one side. The body was placed in the undercut, and a slab of rock was set vertically to close it off before the pit was filled. Such burials were uncovered at Montezuma Well in the Verde valley. The Pima dug a similar grave, using timbers or poles instead of a stone slab to seal the body in the undercut.[35]

In attempting to bridge the gap from 1400 to historic times reference has often been made to the legends of the Pima. Considerable difficulty has been encountered in trying to correlate their legends with the archaeology of the area. When considered in the light of the postulated Sinagua influx, apparent discrepancies are lessened. Russell records a legend[36] which tells of one chief building Casa Grande while his son settled on the lower Salt. At this time the Pima claim they were at war with the people on the Verde to whom the ruins of that area are ascribed. (The postulated Singua influence from the Verde valley began with the building of large Soho phase structures, and the boulder sites of the Hohokam also appear at this time). According to this Pima legend, the coming of the Sinagua was not accepted in too friendly a manner. The Pima also claim to have been created in this area and that their ancestors built Casa Grande and the ruins south of the Gila. Later Casa Grande was beset from the east and was abandoned. Other communities fell in order to the west. After the enemy reached the area west of Tempe they returned to the Gila. (This would seem to be the Saladoan influx, which had less effect on the culture of the lower Salt according to evidence obtained on the above mentioned survey. The enemy's return to the Gila may be represented by the Kwahadks).

Russell recorded five gentes among the Pima:[37] three of the "Red People" and two of the "White People." The White People, according to the Pima, conquered the Red People. Russell remarks that this may signify a union of two peoples. Whether the White People are the Sinagua or Salado is a moot point. Interestingly enough, the Pima claim that there were more than two gentes of White People, but all of them did not get through from their mother world to the Gila.[38] This may imply that a portion of the White People remained in their homeland, possibly the Sinagua who remained in the Verde valley. As interesting as it sounds, this view remains no more than a possible suggestion.

Reference to the tremendous investment the Hohokam had in their canals

35 *Ibid.*
36 *Idem*, p. 25.
37 *Idem*, p. 197.
38 *Idem*, p. 197.

has often been made in another approach. The implication is that they would have remained in the area, and thus have been the ancestors of the Pima. Along this line are interesting observations made by Russell.[39] He notes, following Bancroft, that in 1736-37 Keller found "that many of the rancherias of Kino's time had been broken up." Further, he notes[40] that the Pima told Font in 1775 that they moved their towns away from the river and cottonwood groves so as to better see the approach of Apache. He also notes[41] that Akutciny was abandoned in the early 1800's and that water for crops in that area was dependent upon flood. There are ruins in this vicinity with no canals in evidence. Perhaps this area of flood water farming was that of Saladoan remnants who had practised agriculture in this fashion in their homeland.

The need for excavation of early historic sites on the Salt and Gila is obvious. The relation of the Kwahadks to the Pima, the relative effect the Saladoans had on the cultures of the Gila and Salt, the occurrence of flash flood and controlled irrigation farming, the extent of the Sinagua influence—all require considerable clarification.

To summarize the hypothesis as postulated in this paper, we have the Sinagua introducing new traits through the established trade route into the Salt River valley about 1150 and at the same time a shift in the source of trade ware from the lower Little Colorado River to the middle Little Colorado area and its southern tributaries. This trade apparently reached the Salt through the Verde valley. From 1150 to 1300 the Sinagua became more dominant in the Salt area, and the Hohokam rancheria sites were relocated closer to the walled mounds. Around 1300 the Saladoans entered the middle Gila area, and lesser numbers affected the Salt River valley from the east. The abandonment of parts of northern Arizona during the drought of 1276 to 1299 broke off the former trade originating in the middle Little Colorado area and southward of it. Some of these Little Colorado groups apparently moved farther south in the White Mountains and below the Mogollon Rim, where Fourmile Polychrome was manufactured, small quantities of which were traded into the Phoenix area. The main trade in the Salt region after 1300 apparently came from the southeast in the neighborhood of Sells, probably aided by the Saladoan move into the intervening area sometime in the early 1300's. Overcrowded conditions brought about sufficient unbalance to cause a return to the desert rancheria style of living in order to eliminate the hazards of crowded living. During this process of readjust-

39 *Idem*, p. 28.
40 *Idem*, p. 30.
41 *Idem*, pp. 20 and 22.

ment, there was an assimilation of traits which resulted in the development of the Pima culture.

There is still no apparent reason for the rather rapid diffusion of traits and movements of the Sinagua from the Verde into the Salt valley at 1150 and that of the Salado into the Gila area in the early 1300's. As yet no one has been able to show the presence of the Apache in Arizona prior to 1600. Their presence before that might have been a factor entering this problem. Rogers has suggested a culminating date of about 1600 for the expansion of Yumans into central Arizona; the Maricopa move up the Gila culminating in historic times.[42] The Sinagua move from the Verde area could not have been caused by outsiders, since other Sinagua remained in the Verde until about 1400, and there is no evidence of any cultural change or new culture in the valley at any time between 1150 and 1400. The home area of the Salado reveals no occupation after their abandonment of it. Yet farmland must certainly have been at a premium.

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LINGUISTIC AND ETHNOLOGICAL ASPECTS OF MAZATECO KINSHIP

FLORENCE HANSEN COWAN

IF ONE WERE to fly in an airplane over Mazateco territory, one would be impressed by the fact that, in the main, Mazateco houses are not isolated but rather clustered into groups of twos and threes. Only in the center of towns, where limited space has forced the houses closer together, has this grouping of the houses become lost to view, but even here we find that neighboring houses are inhabited by those near of kin, if not by those of the same family. So this clustered housing of the Mazatecos, so distinctively dotting the mountainsides of the Mazateco region, has a very definite relationship with Mazateco kinship, for to a large extent certain traditional family rules govern where a Mazateco is to live.

Very few Mazatecos live outside of Mazateco territory, which embraces that part of the northern tip of the State of Oaxaca, Mexico, comprised within 18°–18°15' latitude and 96°30'–97°10' longitude. The last census figures obtained from the Mexican government, those of 1930, give the number of the Mazateco tribe as 55,343. The Mazateco language is a member of the Popoloca-Mazateco language family.[1]

Quite a number of the Mazateco kinship terms are derived from a stem not directly a kinship term, but not all of them can be easily broken down as to the meaning of their combined morphemes. A large number of the terms are individual morphemes in themselves. The following paragraphs discuss how certain of the above morphemes have entered into combination with other forms.

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1 The main commercial trading center of the Mazateco tribe is the town of Huautla de Jiménez. The phonemes of the Huautla dialect are as follows: voiceless stops t, k, ʔ; voiceless affricates ć, č, c; voiced nasals m, n, ñ; voiceless fricatives s, š, h; voiced fricative v; lateral l; glide y; flap r; oral vowels i, e, a, o; nasalized vowels i^n, e^n, a^n, o^n.

Stops and affricates are voiced after nasals.

c and š are retroflexed. š is less retroflex when occurring before a consonant than when in other positions.

h is nasalized before nasal consonants.

v becomes unvoiced before h.

The vowel phonemes are laryngealized after any consonant plus ʔ.

The tonemes are indicated as follows: high ´; semi-high ¯; low `; semi-low (unmarked).

Compare George M. Cowan, *Mazateco House Building* (Southwestern Journal of Anthropology, vol. 2, pp. 375-390, 1946).

TABLE OF MAZATECO KINSHIP TERMINOLOGY[2]

Grandparent Generation

nʔàihčáalè	*grandfather* (father's father, mother's father)
nàhčáalè	*grandmother* (father's mother, mother's mother)

(terms for great-grandparents are same as these above)

Parent Generation

nʔàilè	*father* (of son, of daughter)
nàlè	*mother* (of son, of daughter)
šihčáalè	*parents* (only with plural meaning)
¢inìilè	*uncle* (father's brother, mother's brother, both older and younger)
nčokhoaⁿlè	*aunt* (father's sister, mother's sister, both older and younger)

(terms for great-uncle and for great-aunt are same as these above)

Ego Generation

nɛ́ʔè[3]	*brother* (any age) or *male cousin*
ntičha[4]	*sister* (any age) or *female cousin*
nɛ́óolè	*younger sibling*

Child Generation

tiìlè	*son* (of father, of mother)
¢ōtiìlè	*daughter* (of father, of mother)
štiìlè	*children* (only with plural meaning)
tikhàʔmeèlè	*nephew* (brother's son, sister's son)

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2 Kinship terms are given in the third person with the possessive modal enclitic -lè denoting whose kin is expressed. The possessive modal enclitics are as follows: -nà, -lì, -lè, -ná, -nàihiⁿ, -nòo, signifying respectively *my, your* (sing.), *his* or *her* or *their, our* (incl.), *our* (excl.), your (pl.). The two terms nɛ́ʔè and ntičha show possession thus: nɛ́ʔe, nɛ́ʔai, nɛ́ʔè, nɛ́ʔěě, nɛ́ʔaihiⁿ, nɛ́ʔao, signifying respectively *my brother, your brother* (sing.), *his brother or her brother* or *their brother, our brother* (incl.), *our brother* (excl.), *your brother* (pl.). tičha, tičhai, ntičha, tičhaā, tičhaihiⁿ,tičhao, signifying *my sister, your sister* (sing.), *his sister* or *her sister* or *their sister, our sister* (incl.), *our sister* (excl.), *your sister* (pl.).

3 See footnote 2.

4 See footnote 2.

ɕ̄tikhà²meèlè *niece* (brother's daughter, sister's daughter)
²ntíkhà²meèlè used by some speakers for *nephew* and *niece*
²ntíš²ĩⁿlè *baby son*
²ntíčhòō̄ⁿlè *baby daughter*
²ntíílè *baby* (male, female)

Grandchild Generation

²ntíntàìlè *grandchild* (male, female)
(term for great-grandson, great-granddaughter is same as this above)
štintàìlè *grandchildren* (only with plural meaning)

Affinal Terminology

š²ĩⁿlè *husband*
čhòō̄ⁿlè *wife* (only with singular meaning)
yánčhíĩⁿlè *wives* (only with plural meaning)
čhàlè *brother-in-law* (brother of husband or wife)
šònkóolè *sister-in-law* (sister of husband or wife)
n²àičáalè *father-in-law* (husband's father, wife's father)
nàčáalè *mother-in-law* (husband's mother, wife's mother)
škà²ntaàlè *son-in-law, brother-in-law* (sister's husband)
hà²ntaàlè *daughter-in-law, sister-in-law* (brother's wife)
²ntaàlè used by some speakers for *daughter-in-law, sister-in-law* (brother's wife)
škà²ntakàò *wife's sister's husband*
hà²ntakàò *husband's brother's wife*
²ntakàò used by some speakers for *husband's brother's wife*

Secondary Terminology

n²àihoòⁿlè *stepfather*
nàhoòⁿlè *stepmother*
tihoòⁿlè *stepson*
ɕ̄tihoòⁿlè *stepdaughter*
štihoòⁿlè *stepchildren* (only with plural meaning)
nɕ²èhoòⁿlè *stepbrother, half-brother*
ntičhahoòⁿlè *stepsister, half-sister*

The morpheme n$^{?}$ài signifies *father*. It also appears in n$^{?}$àihčáa *grandfather* (hčáa *mature*), n$^{?}$áičáa *father-inlaw* (čáa *?*), n$^{?}$àihoò^{n} *stepfather* (hoò^{n} *on the surface of*).

The morpheme nà signifies *mother*. It also appears in nàhčáa *grandmother* (hčáa *mature*), nàčáa *mother-in-law* (čáa *?*), nàhoò^{n} *stepmother* (hoò^{n} *on the surface of*).

The morpheme n¢$^{?}$è signifies *brother*, whether of a male or of a female, and also *male cousin*, both cross and parallel. The phrase tòhnko n$^{?}$àilè, tòhnko nàlè *only one father, only one mother* may be used to clarify that brothers are meant.

The morpheme ntičha signifies *sister*, whether of a male or of a female, and also *female cousin*, both cross and parallel. The phrase tòhnko n$^{?}$àilè, tòhnko nàlè *only one father, only one mother* may be used to clarify that sisters are meant.

The morpheme n¢óo *younger sibling* appears as an alternate for n¢$^{?}$è or ntičha. No alternate term seems to exist to express the relationship of older sibling.

tìì *boy* is the general term used for males up to approximately twenty years. Followed by the possessive modal enclitics it denotes *son*. It also appears in $^{?}$ntítìì *small boy* ($^{?}$ntíì^{5} *small*), tihoò^{n} *stepson* (hoò^{n} *on the surface of*), tikhà$^{?}$meè *nephew* (khà$^{?}$meè *?*).

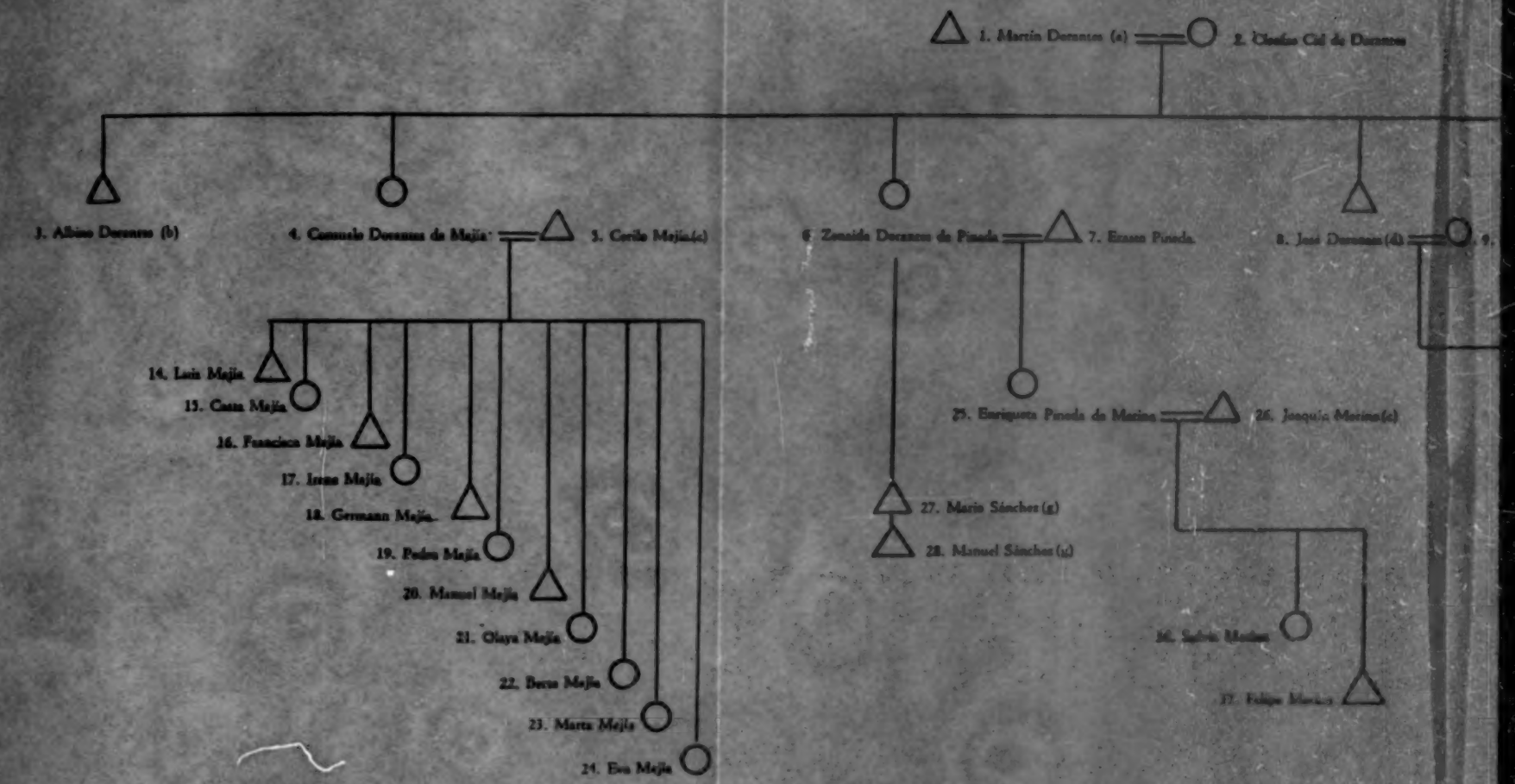
¢ōtìì *girl* is the general term used for females up to approximately twenty years. Followed by the possessive modal enclitics it denotes *daughter*. It also appears in $^{?}$ntí¢ōtìì *small girl* ($^{?}$ntíì *small*), ¢ōtihoò^{n} *stepdaughter* (hoò^{n} *on the surface of*), ¢ōtikhà$^{?}$meè *niece* (khà$^{?}$meè *?*).

The morpheme $^{?}$ntíì signifies *baby*, both male and female, when it stands alone. It also appears in $^{?}$ntíš$^{?}$ì^{n} *baby boy* ($^{?}$ntíì *small*, š$^{?}$ì^{n} *man*), $^{?}$ntíntàì *grandchild* (ntàì *?*), $^{?}$ntíkhà$^{?}$meè *nephew, niece* (khà$^{?}$meè *?*), $^{?}$ntínt$^{?}$iò^{n} *twin*[6] (nt$^{?}$iò^{n} *?*), $^{?}$ntíhč$^{?}$à^{n} *orphan*[7] (hč$^{?}$à^{n} *?*). These latter two terms are used to denote both male and female twins and orphans in the singular.

5 After a certain class of nouns, the end of the noun phrase is designated by a syntactic glide to semi-low tone from high or from semi-high tone, and to low from semi-low tone.

6 There are no special terms whereby twins address one another. The attitude of the Mazatecos towards twins is neutral. They are not regarded as an evil omen, nor are they looked on with special favor. The fact that twins are not commonly seen among the Mazatecos is due to the fact that it is seldom that both twins survive, the smaller one usually succumbing within the first months of life. Some Mazatecos report that twins are produced when the mother has eaten twin sections of a fruit.

7 The term $^{?}$ntíhč$^{?}$à^{n} *orphan* is not listed as a kinship term, but it is mentioned here since it plays a role among Mazateco kinship relationships ethnologically. The term is used of a child whose father or mother, or both, have died.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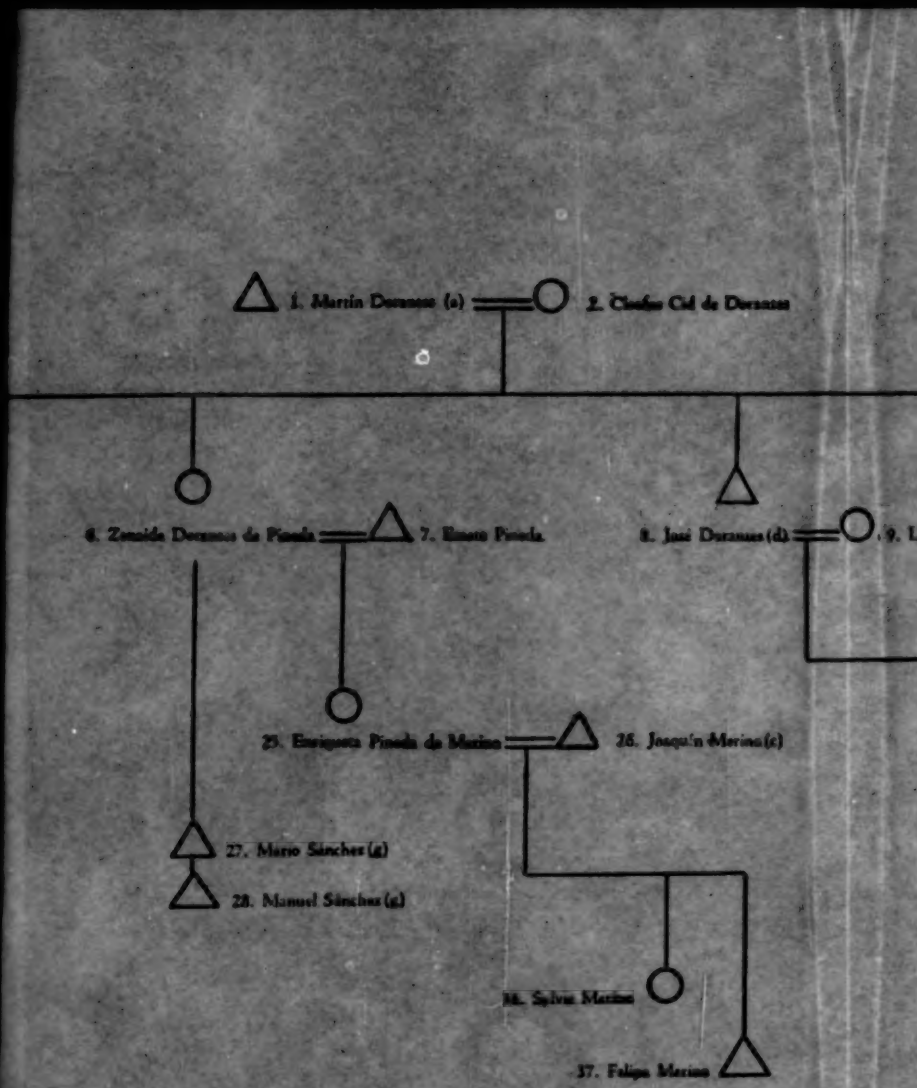
2. Claudia Cid de Donnaes
3. Albino Donnaes (b)
4. Consuelo Donnaes de Mejia
5. Cerilo Mejia(c)
6. Zenaida Donnaes de Pineda
7. Ernesto Pineda
8. José Donnaes (d)
9.
14. Luis Mejia
15. Cesar Mejia
16. Francisca Mejia
17. Irene Mejia
18. Germann Mejia
19. Pedro Mejia
20. Manuel Mejia
21. Olaya Mejia
22. Berta Mejia
23. Marta Mejia
24. Eva Mejia
25. Enriqueta Pineda de Marina
26. Joaquin Marina(e)
27. Mario Sánchez (g)
28. Manuel Sánchez (g)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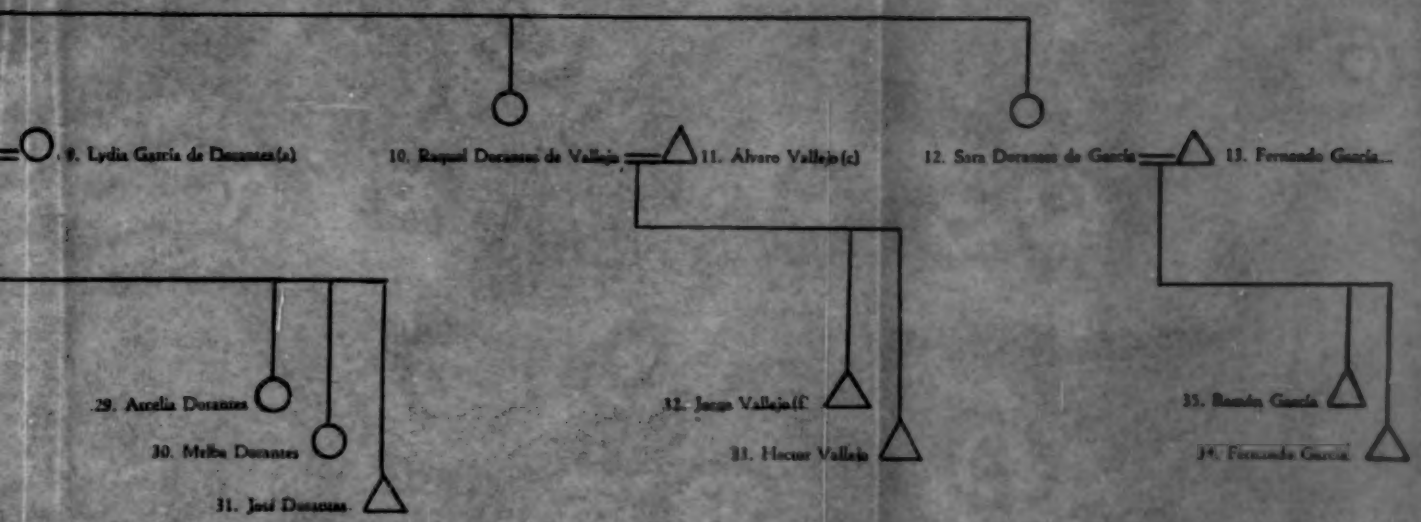
2. Claudia Cid de Duranes
6. Zenaida Duranes de Pineda
7. Ernesto Pineda
8. José Duranes (d)
25. Enriqueta Pineda de Marino
26. Joaquín Marino (e)
27. Mario Sánchez (g)
28. Manuel Sánchez (g)
36. Sylvia Marino
37. Felipe Marino

Genealogy: Cowan



= denotes marriage

△ denotes male

○ denotes female

oldest child on left, youngest on right

(a) Deceased, 1945

(b) Deceased, 1928, single

(c) Mexican, not Mormon

(d) Deceased, 1941

(e) Deceased, 1938

(f) Deceased, 1946

(g) Illegitimate

= denotes marriage

△ denotes male

○ denotes female

older child on left, youngest on right

(a) Deceased, 1995

(b) Deceased, 1928, single

(c) Mexican, not Mazatec

(d) Deceased, 1941

(e) Deceased, 1938

(f) Deceased, 1946

(g) Illegitimate

There is no formal distinction between singular and plural in Mazateco nouns. However, three kinship terms have been noted which are used only with a plural meaning. The morpheme štïì *children* also appears in the following terms, all of which have plural meaning: štintàìlè *grandchildren* (ntàì, *?*), štihoòⁿlè *stepchildren* (hoòⁿ *on the surface of*), štihčʔàⁿ *orphans* (hčʔàⁿ *?*), štintʔìòⁿ *twins* (ntʔìòⁿ *?*).

šʔìⁿ *man* is the general term used for male, but followed by the possessive modal enclitics it denotes *husband*. It is generally assumed that it is the case of legal marriage, and therefore a legitimate husband, but the same term is used in cases of illegitimate relationships.

čhòōⁿ *woman* is the general term used for female, but followed by the possessive modal enclitics it denotes *wife*. When the plural is expressed (for polygyny is known among the Mazatecos, as will be seen), the term yánčhíiⁿ is employed.

čhà *brother-in-law* is the term used when it is a brother in the family married into, but in speaking of the male who marries into a family, the one term škàʔntaà is used for both *son-in-law* and *brother-in-law*.

šònkóo *sister-in-law* is the term used when it is a sister in the family married into, but in speaking of the female who marries into a family, the one term hàʔntaà is used for both *daughter-in-law* and *sister-in-law*. In the speech of some Mazatecos this latter term is given as ʔntaà.

To express one step farther in the affinal relationship the Mazatecos use the morpheme kàò *with* as follows: škàʔntakàò *wife's sister's husband* (škàʔnta *brother-in-law*, kàò *with*), hàʔntakàò *husband's brother's wife* (hàʔnta *sister-in-law*, kàò *with*). In the speech of some Mazatecos this latter term is given as ʔntakàò.

For the secondary relationships the morpheme hoòⁿ *on the surface of* is suffixed to other kinship terms: nʔàihoòⁿ *stepfather* (nʔài *father*), nàhoòⁿ *stepmother* (nà *mother*), etc. In polygynous relationships the term nàhoòⁿ *stepmother* is used by children in speaking of their father's other wives. Likewise a second wife calls the children of her husband by his first wife tihoòⁿ *stepson* (tìì *son*), ¢ōtihoòⁿ *stepdaughter* (¢ōtìì *daughter*). nɸʔèhoòⁿ (nɸʔè *brother*) denotes both *stepbrother* and *halfbrother*, ntičhahoòⁿ (ntičha *sister*) both *stepsister* and *halfsister*.

The morpheme šínkhíⁿ[8] *relative* is a general term used for more distant relationships. When it comes to a relationship such as that of a great-grand-

8 Shows possession thus: šĭnkìà, šĭnkì, šínkhíⁿ, šĭnkìā, šĭnkìhìⁿ, šĭnkìo, respectively signifying *my relative, your relative* (sing.), *his relative* or *her relative* or *their relative, our relative* (incl.), *our relative* (excl.), *your relative* (pl.).

father, great-uncle, great-grandson, etc., it is customary to use the next closest term, namely, that for grandfather, uncle, or grandson (see list above).

The terms used to denote godparent relationships consist of kinship terms plus čikoòⁿ *holy*. They are as follows: nʔàičikoòⁿ *godfather* (nʔài *father*), nàčikoòⁿ *godmother* (nà *mother*), tiʔntíčikoòⁿ or ʔntíčikoòⁿ *godson* (tiì *son* or ntíi *baby*), ¢ōtiʔntíčikoòⁿ or ʔntíčikoòⁿ *goddaughter* (¢ōtiì *daughter* or ʔntíi *baby*). A Mazateco may be called upon many times to be a godparent, not only for marriage occasions, but also for baptisms, confirmations, etc. All the godchildren of one godparent are accustomed to calling each other brothers and sisters.

Ethnologically, the relationships expressed by the kinship terms listed above likewise play a vital part in Mazateco life. Cousin marriages are not permitted, either cross or parallel. This is true of second and third cousins as well as first. However, people with the same surname, if not cousins, do marry. It is quite usual for a young man to seek his wife from another town, entirely outside of his family. In such cases, Mazateco society being patrilocal, the procedure is for the wife to come to live in the town of her husband. Where her husband lives is usually determined by where his parents live, since it is customary for a Mazateco man to live near his parents, even after marriage, filial loyalty being strong. In one case the parents of a village carpenter moved over the mountain range into the large town of Huautla. Following Mazateco custom the carpenter felt it his duty to move along with his parents, moving his family too. Such a procedure may either take a bride away from a large town out to a ranch to live with her husband and his parents, or it may bring her into a large town from a ranch, either case involving need for adapting herself to a new mode of life. One beautiful young Mazateco girl, used to Huautla town life, was forced into a marriage with a young ranchman who lived over the trail eight hours away. The young man's parents lived there; so the natural procedure was for the bride to go to live there too, having to readapt herself to backwoods' life, so to speak.

One old widow has six sons and one daughter all in the same village with her. Six live within a comparatively few yards of where she lives with the one unmarried son, so that we have one of the family compounds spoken of at the beginning of the article. Of the wives of the five married sons of this woman, three are known to have come from other towns.

Though Mazateco society is patrilocal, in the case of orphans[9] authority may fall into feminine hands. Orphans are usually taken over and reared by

9 See footnote 7.

some relative; but if there is an older sister, it may very well fall to her lot to raise her younger brothers and sisters. In such a case the younger brothers recognize with respect the authority of said older sister. Near neighbors of the author are an example of this. María, an older sister, brought up her younger brother, Reynaldo, after their father and mother died. Reynaldo, though now quite a young man, looks to María for the final decision in business matters pertaining to them both. On the other side of the author live another pair of orphans, Irene and Florentino, but in this case it is the brother who is the older, and the sister recognizes herself as under the absolute command of the brother. They were brought up by their old grandmother, and as long as she was living, they were both under her authority.

The marriage of orphans presents a special problem when they are thus brought up alone, for marriages are normally arranged by the parents with or without the consent of the son or daughter. The groom-to-be and bride-to-be may or may not have spoken to each other before their marriage. Marriages by choice are on the increase; marriages by force are on the decrease. In the case of one forced marriage the girl was a sister of the orphans María and Reynaldo mentioned above. It was still another older sister who went ahead and arranged the marriage without the consent of the younger sister. In the case of Irene and Florentino, Florentino wished for some time to get his marriage arranged with a girl who lived a couple of hours or so out from town on a ranch. However, his nearest of kin who is of proper age to act as go-between is an aunt who was ill in still another town and unable to tend to his desire. Marriage arrangements had to be delayed until the aunt became well enough to go ahead with them. When asked who would be his go-between in case the aunt should die, the answer was that they themselves did not know, since that would leave them without a proper near kinsman.

In cases of polygyny the man may bring all his wives into the same family compound, even to the point of bringing them within the same house building, or he may prefer to maintain them in separate villages. In the latter case the children of the relationship remain with the mother, and the father will send money to help provide for them in most cases, if he should be living the greater part of the time in another place. There seemingly is no rule limiting the number of wives a man may take, though generally the number is two in cases of polygyny.

That the basic Mazateco family pattern is a monogamous one, however, is suggested by the fact that in polygynous families the terms for relatives by mar-

riage are applied only to and by relatives of the husband and his first wife. However, all children of such families call each other brothers and sisters.

Economically, kinship again plays a part in Mazateco life, for it is seldom that one generation of a family will rise above the economic level upon which the preceding generation has lived. A merchant's son is apt to become a merchant, or at least to remain in the merchant economic level; whereas a poor ranchman's son will spend his life also working in the fields. This may be partly due to the fact of patriarchal authority, and partly due to the fact that ranchmen do not have the wherewithal to advance their sons, while merchant men are able to give their children the advanced education which naturally accompanies the higher economic levels.

The genealogy on the accompanying chart is that of a merchant family. Martín Dorantes was one of the leading Huautla merchants, and of his six children, three (numbers 6, 8, 12 on chart) followed in his footsteps and likewise had stores. Of the other three children, the son (number 3) was town president and the two daughters (numbers 4, 10) married government employees, non-Mazatecos.

To give an actual application of Mazateco kinship terms, each member of the genealogy has been given a number. One or two examples of each kinship term are now given based on this genealogy. In each case the person represented by the first number applies the term shown to the person represented by the second number. For example, Cleofas Cid de Dorantes (number 2) applies the term š$^{?}$ì^{n}lè *husband* to Martín Dorantes (number 1). This relationship is here shown by the symbols 2 > 1.

2 > 1	š$^{?}$ì^{n}lè	*husband*
1 > 2	čhòō^{n}lè	*wife*
36 > 26	n$^{?}$àilè	*father* (of daughter)
37 > 26	n$^{?}$àilè	*father* (of son)
36 > 25	nàlè	*mother* (of daughter)
37 > 25	nàlè	*mother* (of son)
14 > 1	n$^{?}$àihčáalè	*grandfather* (of daughter's son)
29 > 1	n$^{?}$àihčáalè	*grandfather* (of son's daughter)
37 > 6	nàhčáalè	*grandmother* (of daughter's son)
30 > 2	nàhčáalè	*grandmother* (of son's daughter)
36 > 1	n$^{?}$àihčáalè	*great-grandfather* (of great-granddaughter)
37 > 1	n$^{?}$àihčáalè	*great-grandfather* (of great-grandson)
36 > 2	nàhčáalè	*great-grandmother* (of great-granddaughter)

37 > 2	nàhčáalè	*great-grandmother* (of great-grandson)
1 > 3	tiilè	*son* (of father)
2 > 3	tiilè	*son* (of mother)
6 > 25	¢ōtiilè	*daughter* (of mother)
7 > 25	¢ōtiilè	*daughter* (of father)
1 > 31	ʔntíntàilè	*grandson* (of grandfather)
2 > 31	ʔntíntàilè	*grandson* (of grandmother)
1 > 29	ʔntíntàilè	*granddaughter* (of grandfather)
2 > 29	ʔntíntàilè	*granddaughter* (of grandmother)
1 > 37	ʔntíntàilè	*great-grandson* (of great-grandfather)
1 > 36	ʔntíntàilè	*great-granddaughter* (of great-grandfather)
2 > 37	ʔntíntàilè	*great-grandson* (of great-grandmother)
2 > 36	ʔntíntàilè	*great-granddaughter* (of great-grandmother)
28 > 27	n¢ʔè	*brother* (of brother)
30 > 31	n¢ʔè	*brother* (of sister)
34 > 35	n¢óolè	*younger brother* (of older brother)
36 > 37	n¢óolè	*younger brother* (of older sister)
8 > 6	ntičha	*sister* (of brother)
4 > 6	ntičha	*sister* (of sister)
14 > 17	n¢óolè	*younger sister* (of older brother)
15 > 17	n¢óolè	*younger sister* (of older sister)
30 > 3	¢inìilè	*uncle* (father's brother)
25 > 8	¢inìilè	*uncle* (mother's brother)
31 > 12	nčokhoaⁿlè	*aunt* (father's sister)
25 > 4	nčokhoaⁿlè	*aunt* (mother's sister)
6 > 14	tikhàʔmeèlè (ʔntíkhàʔmeèlè)	*nephew* (sister's sister's son)
8 > 14	tikhàʔmeèlè (ʔntíkhàʔmeèlè)	*nephew* (brother's sister's son)
6 > 15	¢ōtikhàʔmeèlè (ʔntíkhàʔmeèlè)	*niece* (sister's sister's daughter)
8 > 15	¢ōtikhàʔmeèlè (ʔntíkhàʔmeèlè)	*niece* (brother's sister's daughter)
29 > 14	n¢ʔè	*male cousin* (father's sister's son, parallel cousin)
14 > 34	n¢ʔè	*male cousin* (mother's sister's son, parallel cousin)
25 > 29	ntičha	*female cousin* (father's sister's daughter, cross cousin)

15 > 25	ntičha	*female cousin* (mother's sister's daughter, parallel cousin)
13 > 1	nʔàičáalè	*father-in-law* (father of wife)
9 > 1	nʔàičáalè	*father-in-law* (father of husband)
13 > 2	nàčáalè	*mother-in-law* (mother of wife)
9 > 2	nàčáalè	*mother-in-law* (mother of husband)
1 > 13	škàʔntaàlè	*son-in-law* (father's daughter's husband)
2 > 13	škàʔntaàlè	*son-in-law* (mother's daughter's husband)
1 > 9	hàʔntaàlè (ʔntaàlè)	*daughter-in-law* (father's son's wife)
2 > 9	hàʔntaàlè (ʔntaàlè)	*daughter-in-law* (mother's son's wife)
9 > 3	čhàlè	*brother-in-law* (brother of husband)
5 > 8	čhàlè	*brother-in-law* (brother of wife)
10 > 13	škàʔntaàlè	*brother-in-law* (husband of sister)
11 > 13	škàʔntakàò	*husband of wife's sister*
9 > 6	šònkóolè	*sister-in-law* (sister of husband)
13 > 10	šònkóolè	*sister-in-law* (sister of wife)
6 > 9	hàʔntaàlè (ʔntaàlè)	*sister-in-law* (wife of brother)

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MOHAVE WARFARE[1]

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THE MOHAVE INDIANS of the Colorado River valley are by reputation a warlike tribe, although my informants insisted that the people as a whole were pacifically inclined. It was asserted that, while war was disliked by a majority of the Mohave, battle was the dominant concern of the kwanamis ("brave men"), who were responsible for the recurrent hostilities and over whom there was no effective control. Whether or not the mass of the population was averse to warfare, it is clear that the frequent warring expeditions were primarily the result of the existence among the Mohave of a distinct class of warriors with whom warfare was an obsession, who were set apart from other men by the nature of their dreams, and who were continually eager to join a war party to exercise the military powers conferred upon them by the spirits in those dreams. The Mohave were constant aggressors, and since they seldom plundered, economic motivation for war was inconsiderable. Prisoners were taken, but were a secondary objective in battle. Nor was territorial aggrandizement normally the reason for a military campaign, though it impelled the Mohave to drive the Halchidhoma out of what is now the Colorado River Indian Reservation.[2]

The Mohave, in alliance with the Yuma, made a number of incursions into Maricopa territory, the Pima on occasion coming to the aid of the Maricopa. Similarly, the Yuma were at chronic enmity with the Cocopa, and they repeatedly called upon the Mohave to join them in expeditions against the latter tribe. The Halchidhoma are remembered as "Maricopa" who were driven out of the Parker region by the concerted efforts of Yuma and Mohave, but my informants knew nothing of hostilities with the Kohuana or Halyikwamai.[3] There was no

1 This material was obtained on a field trip to the Mohave sponsored by the Department of Anthropology of the University of California in March and April, 1946. Informants were Chief Pete Lambert, 80, at Needles, California, and Lute Wilson, 67, Tom Black, 62, and Mrs Abraham Lincoln (whose grandfather was a war chief), 77, at Parker, Arizona.

2 Mrs Lincoln: "It seems like the Mohave wanted Parker valley pretty bad. It was rich, and they wanted to get rid of the Maricopa, although they spoke a related language. I don't know why the Mohave did it—I guess they wanted to hog everything like the Whites."

3 For accounts of Mohave hostilities with these peoples see Kroeber, *Handbook of the Indians of California*, pp. 799-802, and Spier, *Yuman Tribes of the Gila River*, pp. 11-18 and p. 42.

fighting with the Cahuilla or other Southern California Shoshoneans, and the Kamia, Diegueño, Akwa'ala, and Kiliwa were regarded as distant, rather unimportant tribes who were not enemies of the Mohave.

Relations with the Yuman tribes of Upland Arizona were on the whole friendly, with trade and some intermarriage. The Mohave never fought the Havasupai or Yavapai,[4] and conflict with the Walapai was limited to a few minor encounters.[5] The Shoshonean Chemehuevi were friends until after the establishment of Fort Mohave, when on several occasions they attacked the Mohave. The Paiute, likewise, were normally not enemies, but they joined the Chemehuevi in these forays, and there were isolated skirmishes between Mohave and Paiute in earlier times.[6]

The following narrative of fighting with the Chemehuevi was told by Pete Lambert.

I heard of only two fights with the Chemehuevi. When the Whites were at Fort Mohave they gave the Mohave and Chemehuevi liquor. Before that time the Mohave and Chemehuevi were relations and friends. But then they started to kill one another in drunken fights. The Chemehuevi lost quite a few men that way, and they got sore at the Mohave. A bunch of Chemehuevi warriors came down early in the morning and killed several Mohave near Fort Mohave, and then the Chemehuevi ran to Sand Hill. The Mohave chased them and killed quite a few Chemehuevi at Sand Hill.

The other war with the Chemehuevi was also when the American troop was already here [1867]. The Mormons in Nevada wanted some Mohave women for wives, so they gave guns to about fifty Ute [?], Paiute, and Chemehuevi, and told them to go down and kidnap some Mohave girls for them. They came through up at Forty Nine Road, the old military road up above Ghost Mountain (Avikwame). They went through on the south side of the big wash by Hardyville. Then they came to a place called Moss Mine (Kawačuthomb). A lot of Mohave were gathered to fight over a piece of land at a place called Sand Hill (Anikočkwamb). So there were lots of Mohave there. They were camped and big dances were going on, singing nearly all night and day. At daylight the enemy attacked. Most of the Mohave were unarmed; so the Chemehuevi shot their guns and killed quite a few. They were old-time guns, and shot rocks, not lead. They never cleaned the barrels, and they shot so fast that the guns were not working so good. So they started to

4 Mohave warriors served as scouts with the United States Army against the Yavapai and Apache.

5 When some American miners were killed by the Walapai in 1867, the Mohave war chief sent warriors to escort the Whites and to pacify the Walapai.

6 Wilson: "Sometimes we didn't have much tobacco, and a man might go up around Moapa or Las Vegas and be killed by the Paiute. This led to a fight. Sometimes they came down here, and sometimes we went up there".

run. An unarmed Mohave kwanami ran after the Chemehuevi leader, and the Chemehuevi shot him through the shoulder, but he went right on. He grabbed the Chemehuevi by the hair and threw him down and broke his neck and killed him.

One man lost several relatives in the battle, and that made him reckless for revenge; so he chased after the retreating Chemehuevi all by himself. He caught up with them, and he killed five Chemehuevi by himself, and then the others killed him. When they killed him, they cut him into pieces, and set up poles and strung his flesh out.

While the fight was going on in the morning, the Mohave sent a messenger south to Topock for reinforcements. The kwanamis coming up from Topock did not go to the battlefield, but cut across the mesa to head off the Chemehuevi, and they got up to Hardyville about noon. Meanwhile the Chemehuevi kept on going, but they were exhausted from lack of food or sleep. Some of them fell down and died. The Mohave from Topock gave up the pursuit, or they could have caught and killed them all. The Chemehuevi crossed over to Nevada at a place called Avidunyor, a place where there are high cliffs with Indian designs on the rocks and a lot of bedrock mortars.

After that the soldiers gave the Mohave a gun apiece to protect themselves. They never fought the Chemehuevi again.

The wasauwič ("all the warriors") was an informal association of the kwanamis. Kwanamis, of whom there were forty or fifty in the tribe, were men who had received the proper dreams (sumač ahot) for power in war,[7] and they constituted an amorphous warrior class. They were men of prestige, perhaps outranking even the tribal chief in this respect. The kwanamis were not the only men who went to war, since a war party of forty might include as few as six or seven kwanamis; but men who had unlucky dreams (sumač ačim) remained at home and served as guards during the absence of the warriors.

The dreams of a kwanami began at birth, or even while the unborn child was still in his mother's womb. In his dreams spirits appeared to him, conferring power, instructing him in proper modes of fighting, and teaching him how to avoid injury in combat. The kwanami dreamed of the hawk, a predatory bird whom he would later emulate in battle; and he dreamed of going through dust, which signified that he would come through war unscathed. He dreamed of

7 Kroeber has characterized Mohave culture as a dream culture, in which all conspicuous success is dependent upon dreaming (*Handbook*, Chapter 51). The situation is neatly epitomized on page 754: "The Mohave adhere to a belief in dreams as the basis for everything in life, with an insistence equalled only by the Yurok devotion to the pursuit of wealth. Not only shamanistic power but most myths and songs, bravery and fortune in war, success with women or in gaming, every special ability are dreamed. Knowledge is not a thing to be learned, the Mohave declare, but to be acquired by each man according to his dreams. For 'luck' they say sumach ahot, 'good dreaming', and 'ill starred' is 'bad dreams'."

fighting and killing such ferocious animals as mountain lions and bears. In his dreams he seized the animals by the legs and split them in two.

Kwanamis were unlike other Mohave. Their mode of living was Spartan: they were relatively insensible to cold and heat and were unconcerned about going four or five days without food. They ate little, taking only one meal a day, and they ate alone. They were uninterested in women and sex, few of them marrying until they had grown too old for combat. A kwanami did not farm, although he might hunt or fish, and he spent most of his time reclining in a secluded spot while meditating on the subject of warfare. The kwanamis are described as even-tempered, little given to levity, and silent but not bashful. They "looked tough," but they were not necessarily large men, because "a small man might be a better fighter than a big man." The people believed that the eye of the kwanami was like the morning star, enabling him to discern the enemy in the distance. A kwanami was totally indifferent to death; his thinking was continually dominated by his supreme concern of battling the enemy.

In war the kwanamis competed among themselves to kill the first enemy. Certain honors accrued to the man who was the first to kill, though I am not sure that the emoluments were of a tangible nature. Mrs Lincoln stated that only kwanamis who had killed first were entitled to wear eagle feathers.

Two or three men in the tribe ranked as head kwanamis or war chiefs, for whom there was no name other than kwanami. Like other kwanamis, they theoretically attained their positions through proper dreaming. Each war party was conducted by a head kwanami, whose powers were minimal and not clearly formulated, although he was not responsible to the tribal chief. The head kwanami acted as a leader and officer on the war party, and when the party approached an enemy camp he stopped the warriors and gave them instructions relative to the attack. The tribal chief was not a kwanami and did not go to war.

Since boys learned what they needed to know in dreams, special training for war was regarded as superfluous. Boys between the ages of four and six were subjected to a series of tests or ordeals to determine whether or not they possessed sufficient fortitude to become kwanamis, which meant, in effect, to determine whether or not they were having the necessary dreams for power in war. A kwanami might push a boy into a bee's nest, or he might draw blood by sticking his fingernail into a boy's forehead. He might pinch the boy, or pull his ears, or lash him across the bare back with a switch. The boy who did not exhibit stoicism was not dreaming properly; but the boy who did not cry, but who fought back

or merely stared unconcernedly at his tormenter, was the boy who would become a kwanami.[8]

Boys who passed the ordeals became humar kwanamis ("half-grown warriors"). Between the ages of eight and ten they were taught to use bows and arrows, and they went hunting for practice in marksmanship. For conditioning they ran long distances, but they neither practised dodging arrows, as did the Yuma boys,[9] nor did they engage in sham battles.

The "brave boy" carried a warrior's bow rather than a hunting bow, and he seldom joined the other boys in archery games, since he thought only of going out to kill the enemy. If a brave boy entered an archery contest, he would put his war bow aside and tell the other boys not to touch it, and he would use a hunting bow. He would participate only for a short while, and other boys did not like to play with him, "he was too rough."

Four arrows were conferred upon the brave boy in his dreams, and these were named in sequence, enemy arrow, brave arrow, doctor arrow, and unbrave arrow. The boy preserved them carefully and shot them at the enemy in the above order on his first war party.

Occasionally a brave boy would go on a war party when he had reached the age of thirteen or fifteen. Such boys are said to have been cleverer in battle than older men. Once they had been to war, they became possessed with the desire to go out and fight again. Pete Lambert said that these boys were continually "keyed-up" like race horses; they slept little and were constantly straining to go out and kill. The majority of boys, however, did not go on a war party until they were nineteen or twenty, when they became known as mahai' kwanamis ("young warriors"). Fighting men were in their prime between the ages of twenty and thirty, and they continued to go to war until they were forty.

Members of a war party were naked save for breechclout and sandals. The long hair of the warriors was wrapped up and bound at the back of the head with rawhide. Just prior to the attack warriors applied war paint, delineating on their bodies red, black, and white designs identifying them as Mohave. The hair was painted red. Face paint was always black for war: usually the entire face was blackened, although sometimes a black stripe was painted across the eyes. Horses were not painted.

Eagle feathers were attached singly to the hair of men who had killed first

8 Lambert: "From the start, when he was a boy, they knew he was a kwanami and was going to be a warrior when he got old enough to go out and fight. The Mohave knew that he was dreaming about war."

9 Forde, *Ethnography of the Yuma Indians*, p. 173.

in battle; the other warriors wore feather headdresses (hal'kwe). The headdress had a four-ply netting foundation made from black-eyed bean fibers, and a cord was tied under the chin to hold it in place. Wing and tail feathers of the hawk radiated from a central knot, projecting vertically and hanging down at the sides.

Each warrior carried a gourd canteen, five to eight inches in diameter, with a fiber stopper. The canteen was wrapped with ropes of willow fiber. There were horizontal ropes at the top, bottom, and in the middle, four vertical ropes, and a loop at the top by means of which the canteen was attached to the warrior's belt.

The principle weapons of the Mohave were long self bows (otisa) and mallet headed "potato-masher" clubs (halyawhai), the latter being the more lethal. The club, carved from a single piece of green mesquite or screw-bean wood, was used to advantage in hand-to-hand combat. Its over-all length was approximately one foot, although a stronger warrior might carry a club of greater size. The handle measured seven or eight inches in length and two and a quarter inches in diameter, and the length of the cylindrical head averaged four or five inches, with a diameter of four inches across the top surface. A slight hollow was sometimes burned in the upper surface, leaving sharp edges which were made sharper still by carving. The top surface was painted red, and the remainder of the head and the handle were black. A wrist loop of buckskin or willow bark fiber was passed through a hole three-eighths of an inch from the tip of the handle. Contrary to Yuma and Cocopa custom, the handle was not sharpened for stabbing.

The club was grasped near the cylinder rather than at the end of the handle, and it was usually smashed into the chin or face with an upward stroke. Occasionally the warrior struck downward at the enemy's temple. A warrior might seize an enemy by the hair and club him, then throwing the foe over his shoulder to men armed with heavy straight clubs (tokyeta), with which they cracked his skull.

Both hunting and war bows were plain self bows with a simple curve, and they were usually made of willow. Mesquite was sometimes used for war bows and as regarded as a superior material. The length of the bow varied with the height of the man who carried it, the ideal length being from the ground to the chin. Hunting bows were shorter than war bows, averaging from three and a half to four feet in length. The depth from string to belly averaged six inches, and the grip measured one inch by one and a half inches. Bowstrings were four-ply, and were made of horse or deer sinew. Fiber bowstrings were sometimes used

on hunting bows, but never on war bows. The hunting bow was unpainted, while war bows were painted black on each end and red in the middle. The tips of the war bow were sometimes wrapped in sinew.

Each man made his own bow by the following process. A length of green willow, after drying in the sun, was split lengthwise and worked with stone knives. Willow bark which had been soaked in water was wrapped around half of the bow, and the wrapped end was thrust into a damp pile of earth on top of which a fire had been built. The bow was left in the hot earth for thirty minutes, after which the procedure was repeated with the other half of the bow. Next, the bow was bent back and forth over the knee to give even leverage and to ensure flexibility, and this resulted in a curving of the ends of the bow. Immediately after flexing, the bow was strung.

The Mohave occasionally reinforced their war bows by tying deer sinew on the back of the bow at the grip.

Bows were unstrung when not in use, since the Mohave had little fear of an enemy attack, and the bows could be strung in a matter of seconds. Warriors strung their bows only when nearing enemy country.

Warriors normally stood erect while shooting, holding the bow vertically. Hunters sometimes held the bow in a horizontal position. The bow was held in the left hand and grasped in the middle, although there were some lefthanded and ambidextrous archers. The Mohave knew the secondary arrow release, but the primary release was usually employed.

Arrows (ipa) were of arrow-weed (*Pluchea*), although some use may also have been made of cane arrows: at least the latter were known for tribes to the south. Foreshafted arrows were denied, and Mohave arrows were invariably untipped. No arrow poison was used. The arrow was three-eighths of an inch in diameter and nearly three feet in length. The shaft was painted either red or black. War arrows were provided with three feathers; hunting arrows had four, and the arrows of children two feathers. The feathers of any kind of big bird, except the eagle or buzzard, were used, with those of the hawk and crane the most common. The feather was split in two with the teeth, the outer edges were trimmed, and the halves placed on the same arrow. No gum was used in fastening the feathers to the arrow; rather, sinew was wrapped around the top of the feather, brought down to the bottom, and tied. To identify the arrow as that of a Mohave, the shaft between the feathers was painted black on one side and red on the other.

Green arrow-weeds destined for use as arrows were pulled up by the roots

and placed in the sun to dry. The arrow was then heated, the bark was scraped off with a stone knife, and the end was whittled to a sharp point. The point was moistened and put in hot ashes for hardening.

No arrow-straightener was used for arrow-weed arrows, which were straightened only once. The arrow was heated over a fire to soften it, and it was straightened with the hands and teeth, the maker sighting along the shaft to determine degree of straightness. Cane arrows were sometimes straightened on a plain heated stone.[10] War arrows were not decorated with pyrographic designs, although boys would peel the bark off of green arrow-weeds, twine the bark around the arrow, and set it afire. The bark burned away, leaving a spiralling black design on the arrow.

The maximum flight of an arrow was two hundred yards, but no damage was inflicted at that distance. Arrow penetration varied from two to four inches, depending upon the distance from which the arrow was shot. The arrow was said to be painful if shot from about fifty yards, and at ten yards a direct hit on the heart could be fatal.

Warriors wore a deerhide bowguard on the wrist of the bow-hand; sometimes the guard extended halfway up the arm. The hide was split on the ends and tied. Bark bowguards, braided and tied at each end, were worn by hunters and were discarded after they had been worn a few times.

Quivers (kupet) were usually of the whole skin of a fox, with the hair on the outside and the tail at the top. Coyote and wildcat skins were also used, and Mrs Lincoln mentioned deerskin quivers. An arrow-weed stick served as a reinforcing rod, with a sinew cord attached to each end of the stick so that the quiver could be slung over the back. The quiver was three feet long and three or four inches across, and it contained fifteen or twenty arrows. In battle, in order that arrows might be readily plucked out, the quiver was sometimes put under the arm and held in place with a willow bark cloth wrapped around the torso.

The tokyeta, a heavy straight club of mesquite wood, approximately two feet in length and two inches thick, was used for cracking skulls.[11] Men with tokyetas followed the archers in battle formation, dispatching enemies who had been felled but not slain by warriors with halyawhai (the "potato-masher" club).

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10 Kroeber pictures a Mohave pottery arrow-straightener (*Handbook*, plate 49).

11 A model of a Mohave tokyeta in the University of California Museum of Anthropology (UC-1-4316) is two feet long, tapering from a thickness of one inch at the grip to a thickness of two inches at the far end. The club is provided with a wrist loop, and the upper half of the club is painted red.

Warriors wielded the tokyeta with one hand, beating the foe over the head until he died. The tokyeta was sometimes carried over the shoulder, suspended by a cord passing through a hole at the end of the club, and halyawhai-bearers might have as additional weapons tokyetas thrust through the belt.

Two or three warriors in a party of forty or fifty might carry spears (otat). These were five foot lengths of mesquite wood, sharpened at both ends, with a single feather attached to each end. They were ordinarily borne by horsemen.

Archers carried circular shields (sakol^{y}) of horsehide or deerskin, about two feet in circumference. These were used to protect the heart only. Two forms seem to have been in use: one with a rim of mesquite or screwbean wood over which a hide was stretched, the other rimless, with two hide disks sewn together around the peripheries with sinew. Two holes were punched in the middle of the shield, about four inches apart, with a sinew thong through which the hand was passed to hold the shield. The shield was not feathered, but was painted solidly in red or black. The Mohave did not paint the shield in four quarters as did the Maricopa and Cocopa.

Neither the sling nor the stone-headed club was used in battle. Occasionally a sharp bone or sharpened mesquite stick was used as a dagger, and stone knives (kemadj) were carried to battle but were seldom employed as weapons. The knife was a foot in length, unhafted, and sharpened on one edge only.

The Mohave lacked the curtain shield, and the strip of horsehide to protect the stomach was denied. Mrs Lincoln said that warriors sometimes braided the vines of black-eyed beans and wrapped them around their stomachs for protection.

The feathered pike (okwil^{y}) was a three or four foot length of mesquite or willow wood, pointed at both ends, with chicken-hawk feathers tied onto the shaft in pairs. According to Lute Wilson, the usual number of feathers was forty.[12] Usually an okwil^{y} was adorned with white feathers only,[13] although occasionally one with black feathers was carried. The shaft of the okwil^{y} was painted either red or black.

The okwil^{y} functioned as a flag or standard, and no war party was without one. All informants insisted that there was ordinarily only one standard-bearer on a war party, although if several groups of warriors were attacking from different directions, each group would have an okwil^{y}. The okwil^{y}-bearer went

12 A ceremonial specimen of an okwil^{y} seen at Needles was three feet in length and had thirteen pairs of black and white feathers.

13 White crane feathers, which were believed efficacious in locating water, were sometimes attached to the okwil^{y}.

into battle in front of the other warriors, going into the middle of the enemy and fighting with the pointed ends of the okwil'. He carried no other weapons and no shield. He had non-flight obligations, and if he were killed the okwil' was immediately picked up by another kwanami. There was a tendency, but not a rigid rule, for the same man to carry the okwil' on each war party. The okwil' might be borne by any kwanami, but the bearer was normally a man who had dreamed about feathers and carrying the okwil'.

The huktharhueta, which has not been reported for other Yuman tribes, was infrequently substituted for the okwil', and it had an identical function. Both types of standard were not carried on the same war party. A huktharhueta in Pete Lambert's possession is a three foot shaft of screw-bean wood, unpointed at the ends, with a single fox tail pendant from each end and one from the middle of the shaft.

There was a definite distinction between the small raiding party (hunyu), consisting of ten or twelve kwanamis, and the larger war party (kwanatme), which engaged in a pitched battle. Raiders went out whenever seized with the desire to fight. They departed secretly; there was no meeting or dance of incitement, nor were they obliged to ask the permission of the chief before leaving. They surprised outlying Maricopa camps, killed a few people, and ran away with corn, watermelons, and horses. The horses were killed on the way home; the meat was not eaten, but the hide was saved for sandals and bowstrings.

The war party, an undertaking of the tribe as a whole, had an average strength of forty or fifty men, although on rare occasions it comprised over a hundred warriors. A war party might go out once or twice a year, although usually the intervals between expeditions were longer.

War parties were invariably preceded by one or two scouts, who reconnoitered in the enemy country, locating trails, water holes, and hostile settlements. With his hair done up in a mud plaster as a disguise, a scout sometimes went among the Maricopa at night, even entering the houses and sitting among the enemy. The scout usually succeeded in slipping away before dawn undetected.

Several months often elapsed after the return of the scouts before a war party set out. A few days before the party was scheduled to leave the head kwanami would call a meeting, at which song cycles were sung, and at which warriors were given an opportunity to volunteer for the campaign. If the expedition was to be a joint undertaking with the Yuma, a messenger ran to a prearranged place near Parker, where he left for the Yuma messenger arrows on which were painted black and red signs designating the place and date of attack. Sometimes a

knotted string identical with one retained by the Mohave was substituted for the painted arrows, the messenger carrying it all the way to Yuma. The war parties of both Yuma and Mohave untied a knot each morning, and a simultaneous attack was thus ensured on the morning when the last knot was untied.

A dance of incitement was sometimes held prior to the departure of a war party. (The statements of my informants on the subject were vague and contradictory.) The dance lasted for one day and one night; the women dancing around scalps taken in previous battles; the men singing to the accompaniment of the gourd rattle. After the dance the warriors departed, leaving the women weeping.

There was no prohibition on sexual intercourse before a war party, nor were there food restrictions, although the warriors ate little. They carried with them a mere handful of ground parched wheat, which they consumed over a period of approximately two weeks.

The journey to the Maricopa country required six days. The party was guided by a scout who had previously made a reconnaissance of the territory to be traversed. The warriors at first traveled by day, walking along quietly in a group, talking little, but "feeling no sad feelings." A piece of willow or greasewood was chewed to keep the mouth from getting dry, and warriors could smoke if they wished. Nearing the country of the enemy, the warriors traveled by night and slept in concealment during the day. A sentry, posted about twenty yards from the sleeping warriors, investigated all noises, and he was said to be able to hear footsteps over a hundred yards away. It was an evil omen and a sign that the Mohave would lose the battle if an animal came into camp, but since kwanamis were indifferent to death the party did not turn back.

At home the people watched the sky at night for meteors; the direction in which a meteor fell foretold the winner of a battle. Those left behind were under no special restrictions, but it was deemed harmful to the warriors to think of them except on the day when it was known that they would have joined battle.

Some war parties included one or two women. Such women were from brave families; their fathers or brothers were kwanamis. They functioned chiefly as morale-builders,[14] and they ordinarily did not enter the fray, although they were sometimes provided with tokyetas for self-defense. A number of women accompanied the warriors when the Mohave drove the Halchidhoma out of the Parker region, entering the fight and finishing off wounded enemies with their tokyetas.

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14 Pete Lambert: "She eggs them on; gives some kind of a speech to never do this or that. Makes a noise like a preacher."

On each war party there was at least one shaman. A doctor for arrow wounds (ipa sumadj) was always included in a party. There was sometimes a rattlesnake bite doctor, and Lute Wilson mentioned a third specialist, a doctor for club wounds. En route the shaman made speeches to the warriors, relating his dreams, and admonishing them to conduct themselves with valor in battle. He attempted also to work magic against the enemy, trying to hypnotize them from a distance, so that they would go to sleep or fall unconscious. The rattlesnake doctor was able to locate drinking water.

The wounded were treated at the first night's encampment after the battle; the doctor singing and bathing the wounds. A rattlesnake shaman cured by singing and the laying on of hands, but neither he nor the wound doctor sucked or blew on the wound.

Informants without exception maintained that attacks were always by surprise; the enemy was never challenged or notified of an attack in advance. The Mohave crept up on an outlying enemy settlement under cover of darkness and fell upon the enemy at dawn, shrieking and whooping, with annihilation of the foe the aim. A man might escape and rouse other Maricopa settlements, in which case, if the Mohave advanced, they would find the foe drawn up in battle array, and a major engagement would commence.

Mohave warriors were divided in battle formation according to the weapons they bore. The bearer of the feathered pike went first, followed in that order by men with halyawhai, archers, and tokyeta-bearers. In some war parties from two to five horsemen, carrying bows and arrows or spears, rode on the flanks.[15] A general mêlée ensued once the fray began, and the formation became confused. Warriors were not segregated according to their physical size, nor were there special names for the bearers of different weapons.

Warriors were sometimes separated into three or four groups, approximately equal in numerical strength, each group attacking from a different direction.

The head kwanami at times acted as a challenger before a pitched battle, hurling insults and imprecations at the enemy as he paraded up and down before the warriors. Single combat by champions was denied by all informants.

The duration of a battle was variable: it might last for an hour or two, for half a day, or rarely, an entire day. Lute Wilson said that occasionally the warriors would continue fighting without intermission for two days and nights, until

15 The few horses possessed by the Mohave were well-trained, and were ridden in battle by their owners. Pete Lambert said that the horses knew just what to do in a battle; they knew the formations and could dodge arrows. If a warrior captured a woman he had merely to throw her over the horse's back and the animal would gallop away.

one side was annihilated or until an agreement to suspend hostilities was reached. The Mohave head kwanami would talk to the enemy "face to face," saying, "Now we are returning. You don't have to be afraid of us tonight," and the enemy would reply, "You can go home, and you don't have to be afraid of us chasing you. We won't fight any more until the next time."

Pete Lambert estimated that in an average battle from five to seven Mohave were killed: fifteen dead was a great loss. Eight or ten Mohave might be wounded, some of them succumbing on the arduous return journey, but the majority recovered to fight again.

Time permitting, the dead were cremated on the field of battle, but frequently the bodies were left for the buzzards. A funeral was later held for the deceased; the houses and possessions of the dead warriors were burned and their horses slain.

Mohave warriors feared the magical potency of an enemy scalp; if a man should touch it he would go insane and "holler in the night." Consequently, scalping was performed only by a special scalper, the ahwe somadj ("dream[er] of foes"), who was a shaman rather than a warrior, and who, provided he underwent purification, was unharmed by contact with the scalp. The ahwe somadj, who dreamed his power to scalp, also doctored warriors who had fallen ill due to contact with the enemy.

The scalper went into battle with the warriors and watched for an enemy with "nice, long, heavy hair." There was no preference for the scalp of an enemy war leader. When the scalper spied an enemy with a desirable head of hair, he would knock him down, break his neck, and cut off the head with a stone knife. He ran off with the head to a nearby gulch, where he might hide and scalp undisturbed while the battle was still raging. The scalper made an incision at the outer edge of each eyebrow with a sharp stick of greasewood, and he cut back under the ears. He then made a cut down the face from the bridge of the nose, and ripped off the scalp, which included the ears.[16] Only rarely did he go back into battle to obtain a second scalp. On the homeward journey the scalper would go off by himself at night and "tan" the scalp by rubbing in adobe.

The scalper fasted on the way home, and upon arrival he relinquished the trophy to its permanent keeper, the kohota (dance leader). Then, like the warriors, he purified himself by abstaining from meat and salt and bathing each morning for four days.

Not only enemy slayers but all members of a war party had to undergo puri-

16 Wilson: "The ear is the hardest part, so he bites and trims it with his teeth."

fication, lest the maleficent influence of the enemy drive them insane. Those who had killed were not separated from the others on the return journey, but all the warriors slept little, drank little water, and fasted. When they reached home they immediately bathed in the river and the ablutions were repeated each morning for a period of either four or eight days. The four day period was ordinarily observed, but it was considered more efficacious to undergo purification for eight days. During this time the warriors abstained from meat and salt, and they ate only a little cornmeal mush. Those undergoing lustration were not separated from their families, since relatives were likewise obliged to observe the food restrictions and to bathe each morning.

Now and then a warrior would be taken ill on the homeward journey as a result of the evil influence of the enemy, and he was doctored by the ahwe somadj. But he was regarded as potentially dangerous to his companions while in this condition, and if he were unable to walk the other warriors would not carry him.

After the battle a swift runner (konawowem) was sent ahead to bring tidings of casualties and to tell of the return of the warriors. The kohota then scheduled the scalp dance, fixing a date a day or two after the anticipated arrival of the fighting men. Word was sent to all the Mohave, for the scalp dance was a time of rejoicing and celebration, and since many marriages resulted from meetings of young people on such occasions, the ceremony was regarded as beneficial to the fertility of the tribe.

The kohota dressed and painted the scalp, and mounted it on a long cottonwood pole, which was planted in the ground for the dance. Four or five old scalps were brought out and prepared in like manner.[17] For four days and nights men sang song cycles and women danced around the scalps. Although old women played a major role in the scalp dance, the aged were not the sole participants, since even little boys, painted like warriors and wearing feathers, were permitted to dance. The warriors did not take part in the festivities, but retired to their dwellings.

Women wore eagle feathers in their hair and were painted like kwanamis, with black paint on the face and red paint on the hair. While dancing around the scalp, they mimicked the actions of warriors, yelling and screaming, running and dodging with weapons, and shooting arrows at the scalps. They reviled the scalps; they talked "face to face" like rival challengers. They narrated their war exploits, telling how they had killed and scalped.

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17 Pete Lambert insisted that the scalps were tied at intervals on a single pole, but the other informants said that each scalp was on a separate pole.

Prisoners were required to be present at the scalp dance, but were neither compelled nor permitted to dance. They were not tortured, though they might be insulted and recipient of an occasional blow.

After the dance the scalps passed into the keeping of their permanent custodian, the kohota (also called kohot kusuman^{y}, or ahwe kusuman^{y}), who, like the scalper, was immune to the maleficent power of the scalp. The kohota had as many as fourteen or fifteen scalps sealed up with greasewood or arrow-weed gum in a large gourd or olla which he kept in a corner of his dwelling.

The scalp dance was repeated at harvest time, the person with the largest crop announcing a dance and feast. The kohota prepared the scalps, washing and brushing them, dyeing the hair with boiled mesquite bark, and plastering it with mud, after which he painted the scalps and set them up on poles. The dance was the same as that following a battle, again lasting for four days and nights. After the dance the kohota and his family once more purified themselves by bathing and abstaining from salt for four days.

The Mohave took numerous captives (ahwethauk). These were young women and children, and rarely, adolescent boys; older people were never taken prisoner. Captives were seldom mistreated; and while boys were made slaves and forced to perform domestic tasks, the Mohave in time came to regard them as fellow tribesmen, and "thought more of them than their own sons." Upon reaching maturity the boys might marry Mohave girls, but a Mohave girl would never marry a youth who had grown up in an enemy tribe because "she was scared of him."

Prisoners were magically dangerous, and they underwent purification immediately upon arrival. A shaman washed them for four consecutive mornings with a mixture of soaproot and arrow-weed, and during this period the captives, like returning warriors, were not permitted to eat meat and salt.

Since it was feared that such relations would cause insanity, women were not violated by their captors. Rather, they were given to old men as wives, partly as an insult to the enemy, and partly because it was felt that the old men had only a little longer to live and were indifferent to death. A child resulting from such a union was regarded as a half-breed.

Unlike the Yuma, Cocopa, and Maricopa, the Mohave did not sell prisoners to the Mexicans, and all informants denied that prisoners ever tried to escape, because "they were too well-treated."

Defensive warfare was little developed, since the Maricopa never came en masse to attack the Mohave, and only in later years were the Mohave raided by

Chemehuevi. Sentries were rarely on guard in time of peace, but they were stationed out on the mesa while a war party was away.

To sum up, Mohave warfare was in the main the responsibility of the bellicose kwanamis, who derived their power in dreams. Warfare was an obsession with the kwanamis, and beginning in late adolescence they joined frequent warring expeditions in which the Mohave were allied with the Yuma against the Maricopa and Cocopa. Raiding parties of ten or twelve kwanamis went out at any time, but larger war parties were less frequent, and since they were tribal undertakings they involved somewhat more elaborate preparations. A war party sought to surprise enemy settlements, attacking in a battle formation in which warriors were segregated according to their weapons. The belief in the dangerous magical potency of the enemy, manifested by the presence in Mohave culture of the special scalper, the lustration of warriors, the purification of captives, and the special custodian of the scalp, was the dominant motif of all post-battle activities.[18]

RIVER YUMAN COMPARISONS

I have compiled below a list of warfare elements common to the four River Yuman tribes for which detailed information is available (Mohave, Yuma, Cocopa, and Maricopa), together with lists of elements reported for one or more but not all of these peoples. The total of forty-seven traits shared by these tribes is impressive, and convincingly attests to the homogeneity of the warfare complex among the River Yumans. Such differences between the tribes as occur are not of fundamental importance, representing preponderantly variations in subordinate details. For example, while the basic weapons are the same from tribe to tribe, the Maricopa alone had feather ornaments on their shields, and the Yuma and Cocopa sharpened the handles of their "potato-masher" clubs for stabbing, while the Mohave and Maricopa did not. River Yuman warfare is essentially a unified complex in all of its phases.[19]

Elements common to Mohave, Cocopa, Maricopa, and Yuma. Frequent warfare; large numbers of warriors in war parties; tribe acts as a unit in war; long plain self bow with sinew bow string; untipped arrow-weed arrows; triple radial feathering; arrows straightened with hands and teeth; "potato-masher" clubs;

18 The recent novel *Crazy Weather*, by Charles L. McNichols, contains interesting and accurate narratives of Mohave warfare, as well as engrossing portrayals of other aspects of the culture.

19 This conclusion accords with Spier's finding that ". . . Maricopa culture and that of the Lower Colorado Yumans was in large part a single entity" (*Cultural Relations of the Gila River and Lower Colorado Tribes*, p. 8).

heavy straight clubs (tokyeta); short spears or pikes; feathered pikes with non-flight obligations; circular hide shields; skin of fox or coyote (with tail) as quiver; breechclout and sandals as dress of warriors; black face paint; red paint on hair; feather headdress, radiating feathers on netting foundation; feathers tied in hair of warriors; long hair wrapped and bound at back of head; dreams for power in war; office of war chief; shaman accompanies war party; formal speeches at nightly camps of warriors; warriors eat little en route to battle (ground parched corn or wheat); warriors drink little en route to battle; divided armament, including clubbers and archers; pitched battles; raids; slain enemies scalped; few only scalped, prefer those with "nice long hair"; special scalper with power from dreams; skin of whole head as scalp, including ears; scalp feared as maleficent; scalper purifies self by fasting and bathing; warriors bathe after arrival home; food restrictions on enemy slayers; enemy slayers' families under restrictions; victory dance with scalp on pole; women dance at victory dance; victory dance repeated; scalps kept in sealed olla or gourd; scalps taken out and washed at intervals; special custodian for scalps; sentries sometimes posted; young women and children taken captive; captives purified; women captives "given to old men."

Elements common to all but one River Yuman tribe. Hide bow guard (not reported for Yuma); secondary arrow release (not Yuma); dance of incitement (not Yuma); women go on war party (not Maricopa); challengers (not reported for Cocopa); scalp kicked in air four times (not Maricopa); enemy slayers secluded (not Mohave); all returning warriors restricted, eat and drink little (this applies only to enemy slayers among the Maricopa); scalps kept in house of custodian (Cocopa kept outside dwelling in special structure); captive children sometimes sold to Mexicans (not Mohave); "potato-masher" club wielded with upward stroke (Maricopa struck downward at temple only).

Reported for Mohave and Yuma only. Shield painted solidly in red or black; evil omen if animal comes into camp of outbound warriors.

Reported for Mohave and Maricopa only. Boys subjected to tests or ordeals to determine fortitude; warriors compete to kill first enemy; warriors attack in groups from several directions.

Reported for Mohave and Cocopa only. Bows sometimes reinforced with sinew at grip; old scalps danced with at dance of incitement; victory dance lasts four days and four nights.

Reported for Yuma and Maricopa only. Captives sometimes killed.

Reported for Yuma and Cocopa only. Handle of "potato-masher" club

sharpened for stabbing; feast, "good time" for departing warriors; scalp dance on field of battle.

Reported for Maricopa and Cocopa only. Foreshafted arrows with stone points; "poisoned" arrow points; shield painted in four quarters; enemy slayers march separately on return journey from battle.

Reported for Mohave only. Bows unstrung when not in use; quiver sometimes put under arm and held in place by bark cloth wrapped around torso; huktharhueta (shaft with pendent foxtails) as standard; snake bite doctor accompanies warriors; head of foe cut off to scalp at leisure; scalper doctors those ill due to contact with enemy; certain warriors armed only with plain straight clubs; suspension of hostilities by mutual agreement; women imitate actions of warriors in victory dance; four "dream arrows" of boy who has war dreams; existence of a warrior class and an informal association of warriors (wasauwič).

Reported for Yuma only. Mediterranean arrow release; boys practise dodging arrows; smoke signals to call people together; sham battles; warriors march in single file en route to battle.

Reported for Cocopa only. Grooved arrow straightener; faces of warriors sometimes painted all red or half red and half black; horses painted; special victory songs at victory dance; naked woman in victory dance; people take property of greatest warrior.

Reported for Maricopa only. Sinew-backed bow; feather pendants on shield; white paint on hair of warriors; single combat with lone remaining foe; prefer to scalp enemy alive; enemy slayers make selves vomit.

RELATIONS OF THE RIVER YUMAN WARFARE COMPLEX

I have elsewhere[20] analyzed the distribution of forty-one elements of River Yuman warfare, tracing them through the Southwest and into adjacent areas, as part of a study intended to contribute to the elucidation of River Yuman culture history. It is not practicable to present these data in full here, but a summary of the conclusions reached in the analysis of warfare seems desirable. The strongest affiliations of the River Yuman war complex, in both its material and non-material aspects, are with northern Mexico, twelve important elements linking specifically with that area. The Cáhita war complex in particular, although richer in content, agrees with that of the River Yumans in a significant number of traits. Fundamental weapons are similar, and such non-material

20 *The Cultural Affiliations of the Gila and Colorado River Yumans* (Doctoral dissertation, University of California Library). Sources for comparative statements are to be found in the bibliography at the end of the present paper.

elements are shared as emphasis on warfare, pitched battles, large armies of warriors, semi-formalized procedures, esteem of bravery, divided armament, and non-flight obligations. Thirteen elements, many of them relating to the bow and arrow, occur widely or sporadically, and these were classed as non-diagnostic. A cluster of four traits centering about the concept of the malevolence of the scalp links with the Pueblos, and the office of war chief and the accompaniment of a war party by a shaman parallel Apache traits. The cased skin quiver and the skin of the whole head as the scalp are Californian, and the secondary arrow release is the sole trait linking with the Basin. Seven elements, including the special scalper, the heavy straight club for cracking skulls, the carrying of old scalps to war, and the practice of giving female captives to old men, appear to be River Yuman specialties.

When the River Yuman war complex in its totality was compared qualitatively with the war complexes of representative tribes of contiguous areas, the most striking resemblances were again found among the Cáhita. The Upland Arizona Yumans (Walapai, Havasupai, and Yavapai) share a number of the more widely distributed traits and participate in a few River Yuman specialties, but with the exception of the Yavapai, warfare was for them mainly of a defensive nature, and was much less emphasized than by their river kinsmen. The Pima had most of the River Yuman weapons, and shared some of the non-material aspects of the Yuman war complex, but many of the latter were lacking. The feeling toward war, too, was decidedly different, the sportive character of River Yuman warfare being absent. Hostilities were usually forced upon the Pima by their belligerent neighbors, the Apache, and offensive warfare took the form of retaliatory raids. Upon occasion the Pima came to the aid of their friends the Maricopa in repulsing attacks by the Mohave and Yuma, and it was generally in such engagements that the Pima employed River Yuman tactics and weapons. Among the Papago, the River Yuman war complex appears in a greatly diluted form. The Papago were a peaceful people, warfare being primarily defensive, and there was none of the elaboration or stress on combat that distinguishes the River Yumans. The Southern Californians lacked real warfare, and their war complex remained simple and undeveloped, with a paucity of weapons and procedures, little influenced by the vigorous River Yuman complex. Basin warfare was likewise uncomplex and low-grade in character, with a few basic weapons and a minimum of formalization. Apart from the elements listed above there are few specific resemblances between River Yuman warfare and the respective war complexes of the Pueblos, Apache, and Navaho.

It was concluded that the River Yuman war complex is a blend, consisting in the main of influences from northwest Mexico[21] and widely distributed elements representing ancient generalized culture strata, to which were added at undetermined periods in River Yuman culture history quantitatively lesser ingredients emanating from California and from the Pueblos and Apache. In addition, certain localized specialties were developed by the River Yumans, and the resultant aggregate was invested with the distinctive cast of the River Yuman culture pattern, the elements from the several sources being incorporated and integrated into River Yuman culture, with some alterations in form or function.

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21 The possibility is recognized that the direction of flow of some of the elements shared with the Sonoran peoples may have been from north to south rather than in the opposite direction.

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